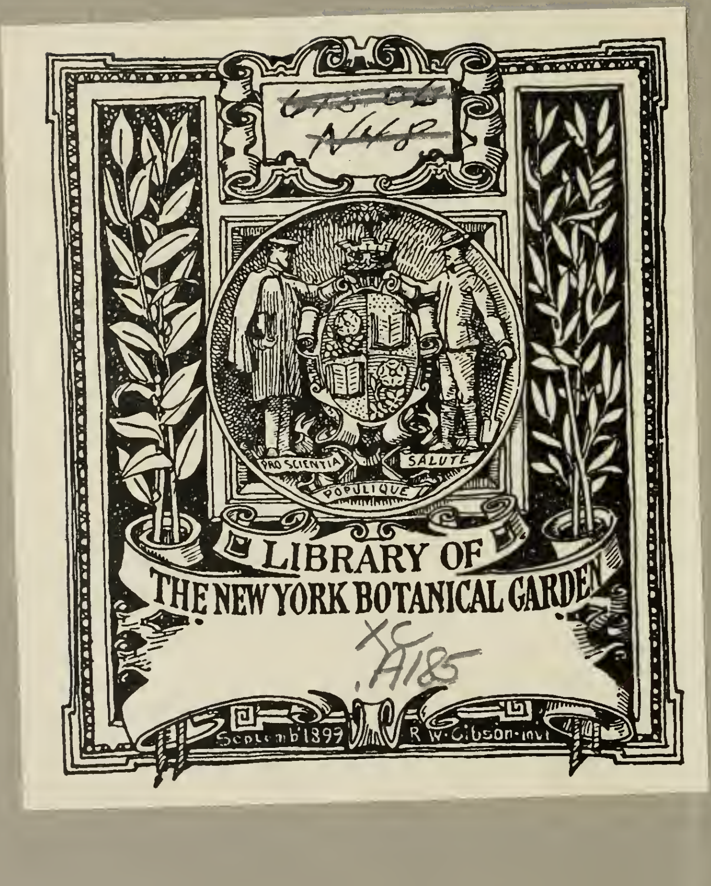

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ALUMNI JOURNAL

Published Monthly
by the
ALUMNI ASSOCIATION

COLLEGE OF PHARMACY
of the
CITY OF NEW YORK

COLUMBIA UNIVERSITY

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1918

The New York College of Pharmacy

Columbia University

The 89th Annual Term of Instruction of this College,

Open to Men and Women,

will begin on Monday, September 23, 1918

The College offers a course of two years, consisting of three days' instruction weekly, to those possessing the Pharmacy Student Certificate of the New York State Education Department, based on fifteen Regents' counts, or one year's work in an accredited high school, and leading to the degree of Graduate in Pharmacy.

N. B.—Beginning with the fall of 1918 this requirement will be increased to 30 counts or two years of high school work.

As a department of Columbia University, the College offers courses of three, four and six years, of three days' instruction weekly through the academic year, leading respectively to the degrees of Pharmaceutical Chemist (Ph. Ch.), Bachelor of Science in Pharmacy (B. S. in Phar.) and Doctor of Pharmacy (Phar. D.). Admission to these courses is based on graduation from an accredited high school, or the certificate of the Columbia University Committee on Entrance Examinations, or of the College Entrance Examination Board. Candidates for the degree of Ph. Ch. alone, who do not intend to study medicine, will be admitted on a Regent's Qualifying Certificate of 60 counts.

The Trustees award two scholarships for the second year to the two members of the first year class of the college course who stand highest at the final examinations of that year.

The Isaac Plaut Fellowship provides seven hundred and fifty dollars annually, for one year of study at a foreign university, for the Bachelor of Science in Pharmacy who holds the highest rank among the members of his class.

The Max J. Breitenbach cash prize of two hundred dollars and the George J. Seabury scholarship provide tuition fees for the fourth year to the two students standing highest at the close of the third year.

A Summer Preparatory Course of twelve weeks prepares the student in special directions for the regular work of the term.

Evening courses in Pharmacy, Chemistry, Urine Analysis, Microscopy, Bacteriology and Pharmacognosy are given in connection with the Extension teaching of the University.

Those interested will please communicate with

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C. U. C. P. Alumni Journal

Published monthly by

The Alumni Association of the New York College of Pharmacy, Columbia University

JEANNOT HOSTMANN, Editor

Contributing Editors: H. H. RUSBY, — G. C. DIEKMAN, — H. V. ARNY

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Vol. XXV. JANUARY, 1918 Number 1

EDITORIAL

A CORRECTION

On page 186 of the December Journal we stated that the "Girls of '18" had presented to Instructor Davis a leather writing set. We were misinformed. The entire Class of '18 and not only the "girls" participated in the presentation.

DEAN RUSBY'S LECTURE

On January 15th, Dean Rusby entertained a large audience with a very interesting talk on his trip to Colombia, S. A. Our Dean has promised to write up his lecture and it will appear in the February issue of the Journal.

MORE REGULATIONS FOR DRUGGISTS

On page 14 may be read several letters which make it appear as if druggists and pharmacists as well as general storekeepers who sell paints, drugs or chemicals must apply for a "Federal Explosive License."

HAVE YOU WRITTEN?

The hearing on the Edmonds Bill (H. R. 5531) before the Committee on Military Affairs of the House of Representatives will be held some time during February. Have you written to your U. S. Senators and Congressman? If not, do so at once, urging them to give their support to this bill which will provide for the men in the army the kind of pharmaceutical service they are entitled to—the same as they received when they were civilians, the same as they will receive when they again become civilians. You owe this to our "Boys." Don't put it off! Write now.

LETTERS FROM THE FRONT

Hospital Corps,
102nd F. B. Signal Corps,
December 20, 1917.

My dear Prof. Arny:—

To start off with, I wish you and the faculty a Merry, Merry Christmas.

I had just received your letter and have noticed in it that the frigid weather in New York City has made you wish you were here. To tell you the truth, if you were here you would wish you were back in New York because the weather here seems to be worse than in the city. We had what is called a regular cold spell here for the past two weeks, accompanied by four inches of snow. The water pipes are frozen up. It was so cold here that the water in the fire-bucket that we keep in our tent froze every night. So you see the weather in New York has nothing on Spartanburg. I washed up only twice a week, that is, every time I went to town to the Y. M. C. A. Yesterday the cold spell broke up and the weather is becoming warmer but only during the daytime.

My tent is fixed up O. K. Have wooden floor and sides, electric lights and a tent stove. About blankets, well I should worry about the cold weather during the night. I have more than my share, have five blankets. So you see, I'm not bad off. This is a pretty good war, darn side better than that Mexican Border stuff I had last year. I am satisfied thru and thru. Rather be in the army than home. The only thing I am kicking about is that although I was one of the first to answer the call, I am still held in America instead of being sent "over there." Hope it will be soon but prospects are pretty slim for quite a while yet. Hope they send us via Camp Mills, would like to be in New York at least once more before I start for "over there." Miller, Kirtland, Burnett, and Coyle are in the 107th Infantry, which is camped next to my outfit. I see the fellows pretty often. I like to hear what is going on in the College, but don't since I haven't received the ALUMNI JOURNAL since last August. It used to keep me well posted with what was going on at the college.

Am glad to hear about the C. U. C. P. Service Flag. Am very proud of it, especially because one of the first stars represents me as the first to leave college to enter the service.

Please let me know if I was the first to leave in the whole of Columbia University. Would like to know because it is a big honor to be the first to be called into service from the biggest university in America. You know everybody can't be first, beside the honor of being first is a prize in itself. If I'm not the first please let me know how I stand on the list. I was ordered out sometime last March.

Am glad to hear that Bacon is "over there" and enjoying himself. What outfit is he with?

Would like to hear from you the first chance you have any time to answer, that is, after you get through correcting the mid-year examination papers which I am now lucky to duck.

Having no more to say at present I will now close wishing you again a Merry Christmas.

Sincerely,

PVT. RENATO M. CORTI.

Camp Wadsworth, S. C.,
January 20, 1918.

Prof. Jeannot Hostmann,
College of Pharmacy,
New York, N. Y.

My dear Prof. Hostmann:

Your most welcome letter of recent date received the other day and it certainly gave me, as well as the other boys, great pleasure to hear from you and to know of what is going on up north.

The package of JOURNALS followed your letter by a day. I am at a loss to express the gratitude that we boys feel toward you for sending the same. I passed them to the boys and they all want me to thank you for sending them and they have all said that they will write you a note of thanks for the same. Up until to-night we have been so busy that we haven't had time to read them. Just before I started this letter we all gathered around our tent fire and began reading them aloud. For an hour or so army life was forgotten, the cold whistling wind disturbed us not, and all of us as we read your JOURNALS thought of the days we had spent at college under your supervision and instruction, talked of the many little incidents connected with those days, and all with one accord agreed that those were the happy days.

The list of the names of the boys that had enlisted interested us very much; many of the boys we had lost track of and the fact that they too had sacrificed all to serve our country and maintain the liberty that we are so proud of gives us all renewed energy to put forth our best efforts to bring this war to a glorious close and to help make those stars that you all have so thoughtfully designated us with shine still brighter because of noble deeds accomplished and to make you and all the other professors of C. U. C. P. feel proud of us. If it were possible for you to publish the different organizations that our boys are connected with we would appreciate it very much.

The weather down here is anything but what might apply to the "Sunny South." The temperature has fallen many times to zero and even below. We manage to keep well, however, and all say when things seem to have reached the limit of endurance, "Well, it might be much worse."

I hope that everything at college is progressing nicely, and that it will be one of the most successful years that the college has ever experienced.

Regarding that picture that I promised to send you of all of us boys, I have tried my best to get them all together several times but it always seems that someone of them is away on some detail or other and thus preventing a picture of the whole crowd, but I promise you that I will try to round them all up some time very soon. As I told them to-night, it's the least that we might do for you.

I well appreciate that you miss Mr. Davis very much. I hope he will like his new work very much and that he will return to you safe and sound.

Give my best wishes to Mrs. Hostmann and also to all of my friends that you might see.

All the boys join me in sending to you and to all the other professors, their assistants, Mr. Simpson, Miss Kerker, Miss Rudolph, Mr. and Mrs. Goetz and John Lavelle our most cordial greetings.

Most sincerely,
(Signed) ARTHUR BURNETT.

SEVEN ADDITIONAL "STARS"

The following additions to our "Honor Roll" were received during the past month:

M. V. Hawkins, '17, Hospital Camp U. S. N. 52nd St. Station, Bay Ridge, N. Y.; J. B. Kaufman, '15, Post Hospital, Fort Jay, Governor's Island, N. Y.; C. Tarallo, '17, U. S. N. (on the way over); A. T. Coccola, '18, Radio Barracks, Harvard University, Cambridge, Mass.; L. D. Short, '13, Base Hospital No. 1, 62nd St. and Columbus Ave., N. Y. City; A. F. Kuhlmann, '10, U. S. N. Medical Corps, New London and Geo. Alliton, '11, who has been at Base Hospital No. 8, American Expeditionary Force, France (M. E. R. C.) since last June.

A. W. Finnegan '18, George F. Ahrens '18 and F. V. Damtoft '18 have enlisted in the Naval Reserve. Finnegan has already reported for duty. Ahrens will not be called before June 1st, while Damtoft may be called at any time.

Mr. and Mrs. George H. Fischer have announced the marriage of their daughter, Mary Elizabeth, to Mr. Thomas F. Fletcher '14, at Utica, N. Y.

Joe Maslon '16 has sailed for France. Frank J. Brannigan '11 may be found in the dispensary at Camp Upton. Jerome T. Ettinger '13 is at Anniston. C. Tarallo '17 stopped in to say good-bye before sailing for France. A. B. Dougherty '19 has been transferred from Pelham to Norfolk, Va., on board the Missouri.

The main reason for the purchase of *War-Savings Stamps* is because your country is at War. Your Country needs every penny which every man, woman, and child can save and lend in order to feed, clothe, arm, and equip the soldiers and sailors of America and to win this righteous war in defense of American honor and the cause of democracy throughout the world.

If we are to win the war, we must win it as a united people. The savings of every man, woman, and child are necessary if we are to hasten the victorious ending of the war. *War Savers are Life Savers.*

senate was more efficient and active than solutions of calcium or basic lead or arsen-

ABSTRACTS

Conducted by Prof. George C. Diekman.

Constituents of Ginger

H. Nomura, in *Chem. Soc. Trans.*, 1917, 111, describes a new constituent of ginger, which he names zingerone, and which he states is a ketone (4-hydroxy-5-methyloxyphenylethyl methyl ketone). The powdered ginger is extracted with ether, when a solution containing a ketone-phenol like substance is obtained. This is isolated by treatment with solution of sodium hydroxide, and subsequent liberation by carbon dioxide. Various impurities are removed by treatment with solution of sodium carbonate. The pure substance is finally obtained by distillation under reduced pressure. Zingerone forms colorless crystals, which melt at 40° to 41° C. It forms characteristic combinations with sodium bisulphite, a benzoyl derivative, an acetyl derivative, a methyl and an ethyl ether.

Bacteria and Fungi in Plants

Experiments carried on by E. Berthold were made with a view to determining the depth to which various bacteria and fungi were able to penetrate plant tissues and the length of time they remained active. The tissues of herbaceous plants and the sap and heartwood of woody plants, were found to be free of bacteria under normal conditions. It was also found that in cases where wood is attacked by fungi, that their presence could be demonstrated, but that bacteria were not present at the same time. A section of a woody plant when placed in water became infected with bacteria and the spores of fungi were also absorbed, the penetration depending upon the length of the vessels in the section. Bacteria when injected into living wood or into tissues of living herbaceous plants were found to remain alive for periods as long as ten months, but development was not observed. The author states definitely that only dead-tissue can be used to promote bacterial growth.

Toxic Value of Arsenates

Tests having for their object the determination of the toxic action of solutions of various arsenates upon the common tent caterpillar (Malacosoma pluvialis) were conducted by A. L. Lovett and R. H. Robinson, and are described in the *Journ. Agric. Res.*, 1917, 10. The authors found that lead hydrogen arsenate was more efficient and active than solutions of calcium or basic lead arsenates of the same concentration. It was found that the quantity of arsenic retained by insects feeding upon plant parts sprayed with arsenic solutions, varies with the kind of arsenate used. While it was found that in the case of basic lead arsenate there is a rapid elimination, in the case of the lead hydrogen arsenate it was shown that most of this is retained in the tissues. Field tests using sprays of calcium arsenate and calcium ammonium arsenate demonstrated that both of these caused too much injury to the plant foliage to render their use possible or desirable. It required about 0.1595 milligrammes of arsenic pentoxide to destroy 1000 small tent caterpillars, and about 1.84 milligrammes of the same substance to destroy 1000 nearly mature caterpillars.

Iodide of Starch

A. Lumiere, in *Comptes rend.*, 1917, 165, discusses the use of iodide of starch in the treatment of infected wounds. He comments upon the desirability of using an agent in the treatment of infected wounds, which will not be destroyed in quick order by the tissues and which will retain its activity for a period of at least several days. His experiments showed that 10 grammes of muscle tissue showing traces of beginning decomposition, completely decolorized 25 milligrammes of iodine contained in 100 mils of solution, in about one-half hour, putrefactive changes then taking place rapidly. Under like conditions he found that a quantity of iodide of starch containing the same weight of iodine (25 milligrammes), still retained some of its blue color after the lapse of one month. The author further reports that iodide of starch, containing one part of iodine in 50,000 parts, was capable of destroying Streptococci, B. coli, and B. pyocyaneus, in 24 hours at a temperature of 37° C. A much weaker solution was effective against Staphylococci. In dressing wounds obtained in battle, it was found that iodide of starch, containing one per cent. of iodine would prove very effective, causing such wounds to remain practically sterile for three dressings. The author also states that a solution of iodide of starch containing 0.50 grammes of iodine in each liter, can be employed in the treatment of wounds by the irrigation method, and that it is quite as effective as Dakin's solution, and entirely non-irritant to tissues.

Decomposition of Amines

P. Sabatier and G. Gaudion, in *Comptes rend.* 1917, 165, report the results obtained by treating amines with finely divided nickel, and resulting in the formation of anilin from various substituted anilins. Finely divided nickel was obtained by reducing nickel oxide at a temperature below 700° C. At a temperature of 350° C. nickel thus obtained converts cyclohexylamine into anilin, while at a temperature below 180° C. the reverse reaction takes place. Under like conditions piperidine yields pyridin, and primary amines are converted into nitrils. Methyl-o-toluidin yielded indol. In a considerable number of the reactions, ammonia splits off, thus ethylamine is converted into ethylene and ammonia, the ethylene in turn being further decomposed into carbon, hydrogen, methane and ethane. Benzylamine formed ammonia and toluene, and methylanilin and dimethylanilin yielded benzene, anilin, ammonia and a number of other products.

Ammonia Formation in Soils

This subject was made a study by G. B. Koch, who reports his findings in *J. Biol. Chem.*, 1917, 31. Soil was mixed with dried blood together with the sulphates of magnesium and potassium and calcium dihydrogen phosphate, in varying proportions, the soil solution being made up to an osmotic pressure of 2 atmospheres. Incubation of the mixture was allowed to continue for a period of eight days, after which the ammonia was determined. A material increase in the quantity of ammonia formed, over that which would have been formed in the same soil, without the salts, was noted when dihydrogen phosphate of calcium was present in quantity of 1/10 of the molecular proportion of the total salts present. When this same salt was present in amounts equalling 8/10, 26% of ammonia was produced. The sulphates alone had no influence.

New Cattle Foods

M. Kling, in *Landwirtsch. Jahrb. f. Bayern,* 1916, 6, reports on the use of new foods for cattle, made necessary because of the war. This article is quoted at length in *Bull. Agric. Intell.*, 1917, 8, pages 892-899, and the following is in part a presentation of the subject-matter of the article by Kling.

1. Rhubarb leaves, green:—These leaves contain about 90% of moisture, 2.78% of protein, and about 0.40% of fatty matter. The dried leaves are reported to rank equally with the best varieties of hay. 2. Seaweed:—In general this substance contains no protein or fat, or at most only small quantities of these. It contains however a large quantity of nitrogen free extract and much crude fibre. Its use in the dried, ground form is recommended chiefly as a supplementary food. No foreign odor was detectable in eggs or meat of animals which had been fed with this substance. 3. Concentrated straw fodder:—Straw, when boiled under pressure with an alkaline liquid, is converted into a concentrated, easily digestible food. A mixture of this concentrate with molasses is made and dried. This product contains about 3.55% of protein, in the form of amides, 29% of nitrogen-free extract, and 53% of fibre. In order to supply the deficiency in albumin, dried yeast was added to the fodder. This was later replaced by ground lupin seeds, deprived of their bitter principle. The thus enriched food contains from 6% to 10% of protein, 44% to 45% of nitrogen-free extractive, and 28% to 34% of fibre. Experiments demonstrated that this food was suitable for all animals, and fully as nutritious as oats when fed to horses. 4. Heather stalks:—A food containing about 4% of protein, 3% of fat, 45% of nitrogen-free extract and 35% of fibre, is prepared from the leaves, flowers, seeds and fine stalks of heather. Ground Sugar Beet Seeds:—Only seeds which have lost their germinating power are used. These are ground into a coarse powder and contain about 11% of protein, 4% of fat, and 9% of mineral matter. The food value of the mixture is said to be about two-thirds that of wheat bran. Beech nut cake:—Ground beech nuts contain about 18% of protein, 4% of fat, 28% of nitrogen-free extract, 19% of fibre, and 5.50% of mineral matter. In order to disguise the taste of tannin, in which these nuts are very rich, about 5.50% of sodium chloride is added. Walnut cake:—The nuts together with their shells are pressed into a cake which is similar in appearance and value to the beech nut cake. A cake pressed by using only the nuts, thus eliminating the shells, is also used, and possesses obvious advantages. Special foods are used in large number. No less than 6 varieties of food for fattening pigs are described.

INFORMATION - BUREAU -

Conducted by Prof. H. V. Arny.

GENERAL INFORMATION.

1. Telephone inquiries will be answered cheerfully without charge. Residents of Greater New York or vicinity wishing to inquire about some pharmaceutical problem will ring up the Information Bureau, Columbus 117, and will receive information immediately, if same is accessible.

2. Non-residents will have their problems answered in the next issue of the C. U. C. P. ALUMNI JOURNAL without cost, if they send their inquiries by mail.

3. Those not wishing to wait for their information until the next issue of the JOURNAL, may have their inquiries *answered by mail by enclosing a self-addressed stamped envelope.*

4. Problems requiring extended research will be handled for a fee as moderate as consistent with high grade service.

5. Translations of articles from foreign languages, either in full or in abstract, as well as transcripts of papers appearing in English or American pharmaceutical, chemical or botanical periodicals will be prepared for those desiring to pay for such service.

6. As in the past, all visitors to the library, desiring to do their own research work, will be given courteous attention.

H. V. ARNY, Librarian.
ADELAIDE RUDOLPH, Bibliography.
HUGO H. SCHAEFER, Queries.

ANSWERS TO QUERIES.

Aristol.—K. C. D., New York.—This is a synthetic chemical similar to dithymol di-iodide of the Pharmacopœia. The manufacturers claim some points of difference, which it is not necessary for us to discuss.

Official Saccharin.—S. L. M., New York, desires to know if the tests for saccharin of the United States Pharmacopœia provide for a product of the same purity as that of the British Pharmacopœia. This chemical called benzo-sulphinide in the U. S. P. and gluside in the B. P. is given entirely different monographs in the two pharmacopœias, the tests of the U. S. P. being much more elaborate than those of the English standard. Both books agree that the chemical should not yield more than 0.5 per cent. of ash and both provide that it should not darken concentrated sulphuric acid with which it is mixed. For other comparisons, we suggest our querist consult the two monographs from the pharmacopœias in our library.

"Herba Herniosae."—T. K. Z., New York.—While we find no reference to a herb of this name, we find a number of articles describing herba herniariae, which is the plant, Herniaria glabra, which has been recommended for catarrh of the bladder.

We are inclined to believe that this drug was the one the prescriber had in mind.

Making Shellac Soluble.—H. A. D., has some bleached shellac that has become insoluble in alcohol. He desires suggestions as to how to remedy the situation.

In all of the books on varnishes which we have consulted reference is made to the fact that if too much heat is applied white shellac goes over into an isomeric state which is entirely insoluble. No suggestions, however, are given to means of redemption of it.

If we had the problem before us we would be tempted to try the effect of a small amount of ammonia added to alcohol used in a solvent.

Stibium Sulphuratum.—B. L. D., New York.—This term is as confusing as are the various sulphides of antimony which it literally means. In *Hager's Handbuch der pharmaceutischen Praxis* five substances are described under the titles:

1. Stibium sulphuratum nigrum or ordinary black antimony.
2. Stibium sulphuratum nigrum laevigatum or purified antimony sulphide of the Pharmacopœia of 1890.
3. Stibium sulphuratum rubrum sine oxido stibico or the sulphurated antimony of the Pharmacopœia of 1890.
4. Stibium sulphuratum rubrum or Kermes mineral of the Swiss "*Ergänzungsbuch.*"
5. Stibium sulphuratum aurantiacum of the Austrian, German, Swiss, British and French pharmacopœias, which is the golden sulphide of antimony, Sb_2S_5.

In this confusion, we would merely suggest that on a prescription for "stibium sulphuratum," we would dispense Kermes mineral of the former United States Pharmacopœia unless it was a prescription written by a foreign physician.

Monsel's Powder.—S. T., New York.—In the *American Journal of Pharmacy* (32-1860-10) is found a recipe for Monsel's salt, which directs the preparation of what is practically solution of ferric subsulphate evaporation of this to syrupy consistence and then pouring on glass plates to dry.

Monsel's original paper, which appeared in *Journal de Pharmacie et de Chimie* (32-1857-208), provides a similar method of manufacture.

The Composition of Proprietary Preparations.—A number of queries to the composition of proprietary remedies have been answered by telephone during the past month, by reporting analyses published by chemists in various bureaus devoted to such work. For various reasons, at this time we will not print the answers to such queries, but will refer our readers to the two publications of the American Medical Association, *The Propaganda for Reform in Proprietary Medicines* and *Nostrums and Quackery,* as well as to the Bulletins of the food and drug departments of the States of Connecticut, Ohio, Indiana and North Dakota, all of which we have in the library.

Dose of Iodine.—K. L. B., New York, has received a prescription calling for tincture of iodine, menthol and castor oil, the tincture being prescribed in a single daily dose of 10 minims. This is of course far in excess of the average of U. S. P. ix, (0.1 mil).

Turning to the table of maximum doses of the German Pharmacopœia we find that the tincture of that book (10 per cent. iodine) is permitted to be given in a daily dose of 0.6 mils. As this represents about 10 minims, we assume that our querist's prescription is a safe one, especially in view of the strong likelihood that some of the iodine will be absorbed (or "organically combined") with the castor oil.

Monesia.—K. S. K., New York.—This is an extract prepared presumably from the bark of Lucuma glycyphlæa. It comes from South America and is used as a stomachic and feeble astringent.

Mixture of Rhubarb and Soda U. S. P. 1880.—J. S., New York.—This preparation was made by mixing 30 parts each of sodium bicarbonate, fluidextract of rhubarb and spirit of peppermint with enough water to make 1000 parts by weight.

Hydrocyanic Acid.—T. M. H., New York, wishes to know the strength for diluted hydrocyanic acid of the Chinese pharmacopœia. As far as we know the Chinese have no national book of drug standards, the foreign concessions in that country using their own standards.

In passing we might cite that the Japanese pharmacopœia directs, as does our own U. S. P., a diluted hydrocyanic acid of 2 per cent. strength.

Names of Manufacturers.—We gladly furnish our querists with information concerning the manufacturers of goods handled by the drug trade, but for obvious reasons, such answers are not published in this department.

Again, Benedict's Solution.—T. M. E., New York, should keep his copies of the JOURNAL and make use of the annual index. If he heeded both of these suggestions he would find on page 48 of the March number a recipe for Benedict's sugar reagent.

Oleum Palma Christi.—R. P. M., New York.—This is one of the numerous synonyms of castor oil.

Cyllin.—T. L. S., New York.—This a proprietary antiseptic similar to Creolin.

Extract of Cicuta.—B. K. H., New York, desires to know the relative strength existing between aqueous and hydro-alcoholic extracts of cicuta.

This opens the vexed question of "what is an extract?" It is obvious that a drug extract is much stronger than a moist one. Thus, as example, the allied but not identical conium extract is of entirely different strengths according to method of manufacture and form of finished product.

Thus the German conium extract is an aqueous extract representing from 3 to 4 grammes of extract from 100 grammes of fresh drug. On the other hand, the dry conium extract is the above aqueous extract dried and mixed with enough lactose to make an extract twice as strong as the ordinary extract. Lastly the dried conium extract of the Swiss Pharmacopœia is a hydroalcoholic extract which is twice as strong as the dried fruit.

Getting back to extract of cicuta, no change from one to another is advisable unless both the alkaloidal content of the old and the new samples are known and are taken into consideration.

THE ALUMNI ASSOCIATION OF THE COLLEGE OF PHARMACY OF THE CITY OF NEW YORK

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MINUTES OF THE MEETING OF THE ALUMNI ASSOCIATION HELD WEDNESDAY EVENING, JANUARY 9th, 1918

The regular stated meeting of the Alumni Association of the New York College of Pharmacy was held on Wednesday evening, January 9, 1918, in the Alumni room at 8:30 o'clock.

Members present were: Messrs. Monroe H. Weil, '10; George C. Diekman, '88; J. Hostmann, '96; J. H. Hecker, '08; E. Steinach, '00; Bloom, '17; L. N. Brown, '14; C. D. Hakes, '11; Wm. Taylor, '13; Medoff, '16; B. W. Sherman, '17; M. Schwartz, '17; John Varga, '17; Wm. Notar Angelo, '17; S. Wetchler, '17; H. Goldstein, '17; and Irving Adlestein of the N. J. C. P. '17.

The minutes of the preceding meeting were read and approved as corrected.

Report of Treasurer: The Treasurer reported that the finances of the Association were prospering.

Report of Audit Committee: The Chairman, Prof. Diekman, made a report and turned over a printed statement and recommendation that the sum of $52.00 be transferred from the reserve fund to the general fund—which is attached hereto. The report and recommendation was approved and accepted, and the Committee discharged with thanks. (Recommendation under unfinished business).

Report of Membership Committee: The Chairman, Prof. Diekman, reported progress.

Report of the Committee to look into the advisability of discontinuing Certificates of Membership: Owing to the illness of the Chairman, Prof. Wimmer, the report was held over until the next regular meeting.

Report of Committee on the Contract for the ALUMNI JOURNAL: The Chairman reported that inasmuch as the Editor elect was present and desired a few minor changes that he thought best to hear from the Editor. Editor Hostmann requested that the clause pertaining to said JOURNAL containing no more pages of advertising matter than pages of reading matter be struck out.

Motion to that effect regularly made, seconded and carried.

The Editor also requested that the term Lessee be omitted.

Motion to that effect made, seconded and carried.

Motion regularly made, seconded and carried that the Chairman of the Contract Committee draw up the Contract as accepted at the meeting and present it signed at the next regular meeting.

Report of Registrar: The Registrar, Professor Hostmann, reported the death of Professor Remington. The Secretary was ordered to draw up a set of resolutions and send them to the widow of Professor Remington.

Report of Special Committee on Class of 1917: Chairman Bloom, '17, reported that he was in correspondence with fifty members of that class.

The Entertainment Committee reported progress.

The Secretary read correspondence from Brother Wm. A. Hoburg regretting his inability to attend the meeting.

The Secretary was ordered to write to Brother Hoburg and express the thanks of the Association and officers for his renewed interest in the Association and for his thoughtful communication—also the regret of the Association and officers for his inability to be present.

Unfinished Business: The Secretary read a set of Resolutions in memory of Charles Holzhauer, which was ordered to be placed on the page of the minutes set aside for our beloved member and a copy thereof sent to the widow.

A motion was regularly made, seconded and carried to authorize the Treasurer to pay John Goetz the sum of $10.00 for services rendered for years 1916-1917; also the sum of $5.00 to John Lavelle for services rendered for year 1916-1917.

Election of Officers: Nomination for a member of the Executive Board to fill the unexpired term of the late Dr. Joseph Weinstein as member of Executive Board.

John Varga nominated. Nominations closed by popular vote. The Secretary was ordered to cast one ballot for John Varga.

The following Committees were appointed by the President:

Committee on Members in Army and Navy—Dr. Brown, Chairman; Dr. J. H. Hecker.

Nominating Committee—Prof. Geo. C. Diekman, Chairman; Mr. A. Henning, Mr. H. Herold, Dr. J. Williams, Mr. John Varga.

After regular procedure the meeting was declared adjourned.

L. N. BROWN, *Secretary.*

REPORT OF COMMITTEE ON AUDIT OF THE ACCOUNTS OF THE TREASURER OF THE ALUMNI ASSOCIATION

To the Officers and Members of the Alumni Association of the College of Pharmacy of the City of New York.

Sirs:

The Committee on Audit of the Accounts of the Treasurer of the Alumni Association of the College of Pharmacy of the City of New York, herewith presents the results of its findings:

The period of audit extends over the time from July 1st, 1916, to and including June 30, 1917.

RECEIPTS

	Gen. Fund	Res. Fund
From Membership Dues	$ 36.00	$ 37.00
From Transfer of Sum from Reserve Fund	52.00	
Cash on hand at last audit, July 1st, 1916	108.53	1,070.13
TOTALS	$ 196.53	$1,107.13

DISBURSEMENTS
as per Vouchers.

	Gen. Fund	Res. Fund
Alumni Prize Account	52.54	
Salary Account	50.00	
Treasurer's Account	5.33	
Engrossing Account	63.00	
Miscellaneous Account	15.00	
Transfer to General Fund		52.00
TOTALS	$ 185.87	$ 52.00
Balance in respective funds on June 30th, 1917	$ 10.66	$1,055.13
Distribution of Funds in hands of Treasurer:		
Lincoln Trust Company		$ 10.66
Emigrant Industrial Savings Bank		5.00
West Side Savings Bank		1,050.13
TOTAL		$1,065.79
Amount in Reserve Fund	$1,055.13	
Amount in General Fund	10.66	
TOTAL		$1,065.79

The Committee also desires to call attention to the fact that on July 1st, 1917, bills totalling approximately $90.00, against the Association, remained unpaid. (Schwebke & Knerr $75.00, John Goetz $10.00 and John Lavelle $5.00.)

The Committee recommends that authority be given to the Treasurer of the Association to transfer the sum of $52.00 from the Reserve Fund to the General Fund, in order to permit a proper adustment of the funds at hand.

Respectfully submitted,

Curt P. Wimmer,
George C. Diekman, *Chairman.*

New York, December 28th, 1917.

FEDERAL EXPLOSIVE LICENSES

The following letters need no further explanation:

January 15, 1918.

C. U. C. P. Alumni Journal,
115 West 68th St., New York City.

Gentlemen:—

An Act of Congress (Public Document No. 68, Sixty-fifth Congress) to prohibit the manufacture, distribution, storage, use and possession in time of war of explosives, and the ingredients thereof, provides that a license from the Bureau of Mines is necessary for every person, firm or corporation, to purchase, possess, sell or use, any explosive or the ingredients thereof.

Any violation of this Act is punishable by a fine of not more than $5,000, or by imprisonment of not more than one year, or both fine and imprisonment.

The Bureau of Mines has published the attached list of articles requiring licenses under this Act.

As the readers of your journal are, undoubtedly, interested in this subject, I am taking the liberty of calling it to your attention for such publicity as you are able to give it.

Federal Licenses may be obtained from John R. Healy, Room 1100, Municipal Building, Manhattan, or John F. Dixon, No. 365 Jay Street, Brooklyn. Application must be made in person. Duly authorized officers of corporations or companies must make application for the company or corporation.

Respectfully,

(Signed) J. R. Healy,
Federal Licensing Agent.

INGREDIENTS

(List approved January 5, 1918)

The purchase, possession, sale or use of anyone of the ingredients herewith listed below in amounts of *one ounce or over* requires a Federal Explosive License.

Bichromates:—ammonium, potassium, sodium; Chlorates:—barium, potassium, sodium, strontium; Chromates:—ammonium, barium, calcium, chrome green, chrome yellow, lead, potassium, sodium; Nitrates:—ammonium, barium, copper, ferric, lead, magnesium, nickel, potassium, silver, strontium; Nitric Acid:—aqua fortis, fuming, nitric acids of all grades and strengths, mixed acids; Perchlorates:—perchloric acid, potassium; Perborates:—magnesium, sodium, zinc; Permanganates:—calcium, potassium, sodium; Peroxides:—barium, calcium, magnesium, oxon (cubes and cartridges), sodium, strontium, zinc; Phosphorus.

Mr. John R. Healy,
Federal Licensing Agent,
Room 1100, Municipal Bldg., New York City.

Dear Sir:—

We have before us your letter of January 15th in re:—the licensing for the storing of explosives. We wish to thank you for same and would like to say that insofar as we have an information bureau which is largely patronized by pharmacists we would like to ask the following questions:

1. Is it necessary for pharmacists and druggists to make application for such a license?

2. Is it necessary for institutions of learning, for instance, colleges, high-schools, etc. to make application for said license?

We take it for granted that any chemist conducting a commercial laboratory must make application for the license, if any of the enumerated substances are on hand in quantities of one ounce or over.

Thanking you for your attention, we are,

Very truly yours,
(Signed) JEANNOT HOSTMANN,
Editor.

January 25, 1918.

C. U. C. P. Alumni Journal,
Department of Columbia University,
115-119 West 68th Street, New York City.

Gentlemen:—

In reply to yours of January 17th, 1918, I have to advise that the answer to both your inquiries is "Yes."

I enclose herewith a copy of the law.

Respectfully,
(Signed) J. R. HEALY,
Federal Licensing Agent.

407 New Members Elected in 1916.
Organized 1897 Incorporated 1902
American Medico-Pharmaceutical League
The First Medical Association in America
to Admit Pharmacists.——Object: Co-operation.
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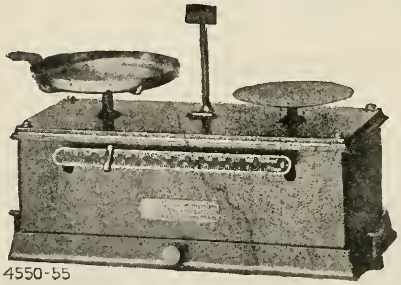
NEW TORSION BALANCE



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Capacity	ounces	8	16
Sensitiveness	milligrams	16	16
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C.U.C.P.
ALUMNI JOURNAL

Published Monthly
by the
ALUMNI ASSOCIATION

COLLEGE OF PHARMACY
of the
CITY OF NEW YORK

COLUMBIA UNIVERSITY

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TRAVEL IN COLOMBIA

BY

DEAN RUSBY

Subscription
Per Year $1

Single Copies
20 cents

Address all communications
— C.U.C.P. ALUMNI JOURNAL —
No. 115-119 West 68th St, N.Y.C.

NEXT ALUMNI MEETING, MARCH 13, 1918

The New York College of Pharmacy

Columbia University

The 89th Annual Term of Instruction of this College,

Open to Men and Women,

will begin on Monday, September 23, 1918

The College offers a course of two years, consisting of three days' instruction weekly, to those possessing the Pharmacy Student Certificate of the New York State Education Department, based on fifteen Regents' counts, or one year's work in an accredited high school, and leading to the degree of Graduate in Pharmacy.

N. B.—Beginning with the fall of 1918 this requirement will be increased to 30 counts or two years of high school work.

As a department of Columbia University, the College offers courses of three, four and six years, of three days' instruction weekly through the academic year, leading respectively to the degrees of Pharmaceutical Chemist (Ph. Ch.), Bachelor of Science in Pharmacy (B. S. in Phar.) and Doctor of Pharmacy (Phar. D.). Admission to these courses is based on graduation from an accredited high school, or the certificate of the Columbia University Committee on Entrance Examinations, or of the College Entrance Examination Board. Candidates for the degree of Ph. Ch. alone, who do not intend to study medicine, will be admitted on a Regent's Qualifying Certificate of 60 counts.

The Trustees award two scholarships for the second year to the two members of the first year class of the college course who stand highest at the final examinations of that year.

The Isaac Plaut Fellowship provides seven hundred and fifty dollars annually, for one year of study at a foreign university, for the Bachelor of Science in Pharmacy who holds the highest rank among the members of his class.

The Max J. Breitenbach cash prize of two hundred dollars and the George J. Seabury scholarship provide tuition fees for the fourth year to the two students standing highest at the close of the third year.

A Summer Preparatory Course of twelve weeks prepares the student in special directions for the regular work of the term.

Evening courses in Pharmacy, Chemistry, Urine Analysis, Microscopy, Bacteriology and Pharmacognosy are given in connection with the Extension teaching of the University.

Those interested will please communicate with

Secretary's Office, 115-119 West 68th St., New York City

C. U. C. P. Alumni Journal

Published monthly by
THE ALUMNI ASSOCIATION OF THE NEW YORK COLLEGE OF PHARMACY, COLUMBIA UNIVERSITY
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Vol. XXV. FEBRUARY, 1918 Number 2

EDITORIAL

QUID PRO QUO?

There has been introduced in the House of Representatives a bill to amend section ten to thirty-seven of the Act entitled "An Act for making further and more effectual provision for the national defense, and for other purposes."

This bill, H. R. 9389, introduced on January 30, by Mr. Hicks of New York, provides for the reorganization of the Medical Department of the Army. Section 6 reads as follows:

"That there shall be established a department of pharmacy with a commissioned officer at the head, who shall rank as colonel, and with such number of commissioned subordinates with rank of majors, captains, and lieutenants, as may be determined by the Chief of the Medical Department and the Secretary of War, all of whom must be graduates of some recognized college of pharmacy.

"This department shall be charged with the purchase and distribution of all medical and hospital supplies, the care, preservation, and preparation of medicine, dressings, books, and appliances, and the sterilization and care of all instruments. It shall also be charged with the clerical work, the maintenance of records, and correspondence relating to hospitals and their inmates, the rendering of returns, reports and records pertaining to the sick and wounded."

The introduction of this bill has been a great disappointment to many friends of the Edmonds Bill, many of the latter fearing that this duplication of bills would retard the creation of the much needed and desired pharmaceutical corps.

Naturally there will be a difference of opinion as to which of the two bills possesses the most merit. However, we feel that when all is said and done that all believers in the need of the "putting of pharmacy" in the Army will agree that what is most important for the members of the Army as well as pharmacy is the recognition of pharmacy as such. If this object is once obtained, then it will make little difference whether it was brought about by the Edmonds Bill or the

Hicks Bill or any other bill. If the Hicks Bill stands a better chance of being placed upon the statutes by Congress—then by all means let us have it—let us support it.

Unless we are very much mistaken a great many of those who have been boosting the Edmonds Bill have always had in mind the principle behind the bill more so than the bill itself.

Probably, if necessary, the Hicks Bill may be amended if the need of amendment is brought out at the proposed hearing.

We feel that the efforts put forth in "boosting" the Edmonds Bill have not been in vain, even if it is now superseded by the Hicks Bill. These efforts certainly have had their part in making it plain to those in authority that there exists a crying need for the establishment of a pharmaceutical department in the Army if the health of the members thereof is to be properly guarded. J. H.

PRE-REQUISITE IN NEW JERSEY

Governor Edge of New Jersey has approved of Senate Bill No. 52 which was introduced by the Committee on Legislation of The New Jersey Pharmaceutical Association.

We quote from the new statute as follows: "—and shall have been duly graduated from a school of pharmacy complying with the rules and regulations of 'The Board of Pharmacy of the State of New Jersey,' *and shall present to the board a certificate from The Commissioner of Education of this State showing that such applicant, before entering the school of pharmacy, had obtained an education equivalent to the standard established by the Board of Pharmacy of the State of New Jersey*—." The board has set as the standard the successful completion of a year's work in an approved high school or its equivalent.

The successful termination of the efforts to bring New Jersey back where it should be, among the leaders in professional pharmacy, is very gratifying. When the act of 1895 was placed upon the State statute books, New Jersey was considered as a leader in progressive pharmaceutical legislation. Then for some intangible reason it just sat tight and did not move. Several years ago the fight was taken up again and just so often as defeat was encountered just so often was the fight renewed with redoubled energy and enthusiasm. Now that success has been achieved we wish to congratulate the members of The New Jersey Pharmaceutical Association upon the victorious end of the long fight waged by them through their able representatives on the Committee on Legislation. J. H.

A LETTER FROM FRANCE

Mr. David Costello has very kindly sent us a letter received from George Alliton '11 who is with the American Expeditionary Forces in France. This letter will appear in the March issue of the JOURNAL.

Travel in Colombia

By H. H. Rusby

In the *Oil, Paint and Drug Reporter* of January 24, I published an article on the commercial opportunities afforded by Colombia, but was able to say but little therein regarding the peculiar methods of travel and transportation that the country affords. It has occurred to me that in these times of emergency, and of military activity, a special article on this subject would prove of interest to many readers of the Alumni Journal.

Regarding railway transportation, there is little to be said. There are but few railroads and these are relatively short. They are also mostly separated from one another. Instead of combining and centralizing control, as in our country, with an eye to reducing the extent of the managerial staff and of the overhead charges, the tendency in tropical America is to decentralize and divide up the management as far as possible, so as to create the largest number of separate boards and officers. The result is that even when two roads use the same terminal, the passengers are obliged to make inconvenient transfers. More often, however, the terminals are separated unnecessarily, sometimes by considerable distances, the resulting inconvenience being very great. The depot facilities are usually very poor. All baggage has to be weighed and papers issued for it. This

THE TRAVELLER IN THE TROPICS

will be done only after the passenger has secured and exhibited his ticket. The ticket and baggage offices are usually far apart. The passenger, after purchasing his ticket, goes to the freight depot to have his baggage weighed. This service is not performed by the railroad officials, but by a separate porter who must be employed to put the baggage on and remove it from the scale. At every station, there are men who make their living through the performance of such services. In practice they are allowed to charge what they like, and the inexperienced stranger, especially if he cannot speak the language, fares very badly. The scene at one of these stations where there is extensive travel, is one of great confusion. There is no formation of a line or regular order of procedure and the porters wrangle, struggle and all but fight for precedence. One porter will often take charge of the baggage of several passengers, and his skill in keeping track of all the different pieces is marvelous. Breakage and theft of baggage is of very common occurrence. I have struggled from eleven P.M. until four A.M. to hold my luggage together at a transfer station until its turn was reached, in a large room piled nearly to the roof with a confused mass of baggage of every conceivable form and kind. When at last one secures his certificates of weight, he must go back to the ticket office, make payment, obtain his receipt and return again to the freight house for his check. There can, of course, be no rapid work, and unless there happens to be plenty of time, the passenger is likely to be left for many hours and even for an entire day or more. Employees are almost always polite and attentive and once upon the train, travel is very comfortable. There are no sleeping car arrangements, because there is no night travel. These mountain railways in the Andes are exceedingly dangerous, and companies will not risk running their trains at night. Many if not most of the engines are wood burners.

Water transportation in Colombia is by far more prevalent than that by means of railways. Most of the large cities are on or near the coast, of which Colombia has about a thousand miles on the Pacific and another thousand on the Caribbean Sea. There are some rivers on the Pacific side that are navigable for short distances for small boats but most of the river navigation is upon streams running north into the Carribean. The most western of these streams is the Atrato, which debouches quite close to the Canal Zone. The steamers plying upon this stream are small. Farther to the east, the Sinu is quite important, although navigation by large steamers is scarcely possible. Into the Sinu flows the San Jorge. Both of these streams descend from valleys of the northwestern Andean slope. Throughout the most of their length they are rapid and rocky and permit of no navigation, except the very perilous use of rafts, of which more will be said farther on. Their lower portions, however, run to a low coastal plain where there is an extensive network of interconnecting channels, the total length of which affords a very extensive range for steamer travel. Still farther to the east is the river Cauca, which runs north through a very long and rich mountain valley, separated by high mountains from the Sinu upon the west, and from the Magdalena upon the east. Throughout much the greater portion of its course it is navigable only for rafts, but toward its mouth there is a navigable portion which constitutes a very important means of communication with the Magdalena River, into which it flows about a hundred miles above the mouth of the latter.

The Magdalena River is far more important, as a navigable stream, than all the other rivers combined. Toward its mouth it is several miles in width during the rainy season. Unfortunately, ocean steamers cannot enter this river, because of a large and shifting mud bar near its mouth. For this reason, passengers landing at Porto Colombia, its nearest ocean port, have to travel about two hours by train to the city of Barranquilla, where the custom house is located, and where their baggage is examined. Barranquilla is not located directly upon the river bank, where the ground is too low, and is subject to frequent inundations. It lies a little to the west of the river, with which it is connected by an artificial canal. The west bank of this canal has very extensive dockage, where a large number of river steamers maintain their terminals. These steamers belong to a number of different companies, but the latter have some sort of an understanding as to their sailing days, so that there is not such a ruinous competition as would be possible under other conditions. They are all stern-wheelers and of very light draught, the largest of them drawing not more than three feet of water when fully loaded. They burn wood altogether, and great delays in transit are caused by the frequent and long stops required for taking on fuel. All along the river, for hundreds of miles on both sides, are wood-choppers' camps where cord wood is accumulated in piles as close to edge of the water as safety permits. The steamer captains note all these supplies and when in need stop and barter with

MAGDALENA RIVER STEAMERS

the owner. The amount of wood consumed on one of these steamers is astonishingly large, so that several stops have to be made each day. These wood piles are favorite lurking places for serpents, many of which are very poisonous, and accidents during the taking on of fuel are of very common occurrence. Not only snakes, but scorpions and centipedes have to be continuously watched for.

The life of the passenger on one of these steamers is very far from comfortable, even when electric fans and ice supplies are furnished. The heat in this river valley is extreme and of a kind that is very trying, especially to the northern visitor. The natural heat of the sun is greatly increased by the fierce radiation from the wood-burning furnaces, from which it is impossible to escape. Upon the uppermost deck, upon the shady side, there would be comparative comfort, but one cannot remain there, owing to the showers of hot cinders which are continually falling and which quickly burn holes in the clothing exposed to them. Not understanding this difficulty, I had my suit of clothing completely destroyed during my first day upon the river. The first stage of river travel, in making the journey to Bogota, the capital, carries one about four hundred miles from Barranquilla, to La Dorado, beyond which the steamer cannot pass, owing to the rapids. This journey, under exceptional circumstances, can be made in six days, but quite as often it requires nine or ten, if the boat is slow or if the river is low, if there is much freight to be handled, or if the boat frequently runs aground or remains grounded at one place for a considerable length of time. The river follows a serpentine course. Upon the one side it will cut away the mud banks so as to form a deep channel at that point. This mud is then carried downward and outward to the other side of the river, forming, as it leaves, a mud bar with very shallow water. Great experience and skill are required at such places to know exactly where the transit can be most safely made. In the lower part of the river, or when the water is high, the steamer sweeps along rapidly and without danger, but at any time, the water is liable to fall so that the bottom of the steamer will touch more or less strongly in passing the bars. On every trip it is certain to be grounded a number of times. Usually a little manoeuvering, or assistance from a passing vessel, enables it to be floated with but little delay, but at times it becomes so firmly embedded that there is no escape until the river rises. For this one rarely has to wait more than two or three days, at any season, although occasionally boats have remained stranded for a week or two. Many and strange are the devices that are employed for escaping from these mud banks. The commonest method is to run a wire cable to the bank, attach it to a tree and then wind up on the capstan. Sometimes the tree will be pulled out by the roots; at others the cable will snap. Upon one of our journeys both results occurred a number of times, and at length an ingenious and tedious device was found necessary. A strong tree trunk, like a short mast, carried for the purpose, was planted in the mud by the side of the boat, its upper end overhanging the deck. A cable was run through a pulley at its upper end and through another pulley attached to the deck of the vessel. By winding up the end of this cable, the boat was necessarily drawn toward the end of the trunk and it was thus moved a few feet out of its position toward the channel of the river. The trunk was then taken up and again planted a few feet nearer to the channel and the operation was repeated. In this way, after many hours of consecutive work, the vessel was gradually drawn into water where it could be floated.

The most comfortable of the state rooms found on these steamers are sufficiently uncomfortable. Owing to the custom of stealing small articles that can be carried away, the vessel furnishes no bedding of any kind, except a bare canvas cot; no mattress, covering or pillows, no soap nor towels, and in fact nothing in the way of furniture except the cot referred to and a cheap chair or two. Unfortunate indeed is the passenger who has not been informed and who has not provided himself with an outfit sufficient not only for the ordinary occasion but for emergencies which are liable to greatly extend the duration of his journey.

The clothing worn upon these vessels must be very light and thin in order to be tolerable. White suits of linen or cotton duck are the rule. They very quickly become soiled and one must take several suits, with extra trousers, in order to be sure of making a presentable appearance. Meals are served in a long central saloon with the state rooms opening along its sides. The heat here is so great that one finishes his meal as quickly as possible and is glad to escape into the open air. There is a very great difference in the bill of fare supplied on the different steamers. I have fared very well indeed upon the best of them, while upon another, I have found it almost impossible to eat the food and have suffered very considerable hardship from hunger. No one who can do so should ever take passage upon one of these steamers without supplying himself with some biscuits, sardines, soups, canned meat or something of the kind, and especially with a supply of lemons and fresh fruits. At times, delicious mangoes, pineapples, oranges, bananas, etc. are to be had at the stopping places, but at others one may make the entire journey without encountering fruit of any kind. A medicine case containing the simplest requirements, especially some laxative drugs, should be carried by everyone. Above all, one should not travel without a supply of quinine. Toilet accommodations upon these vessels are of course of the most wretched description. For bathing purposes one uses the river water and after a bath he may spend some time in combing the river mud out of his hair.

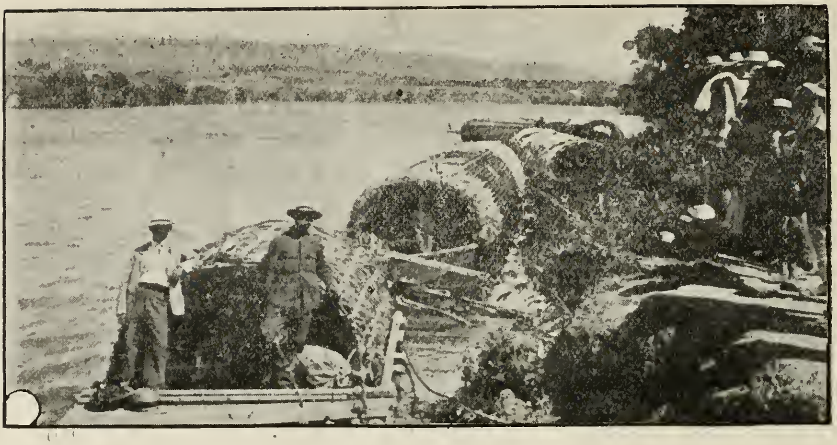
Perhaps the most disagreeable of all the features connected with this river travel is the difficulty in obtaining state rooms. The steamers are usually overcrowded, and unless one telegraphs in advance—a week or two ahead of the sailing day—he is quite likely to find himself without a room. He will then be given a cot which he may place upon the deck in any position most satisfactory to himself. The result is that as soon as bed time arrives, it is practically impossible for anyone to move about the vessel, as every available foot of space is crowded with cots bearing their sleeping occupants. The experience of those who are trying to sleep amidst this noise and confusion, in the presence of the strong lights and with no protection against mosquitoes and other insects, can readily be imagined.

In spite of all the inconveniences and physical discomforts, these river journeys are of the most interesting character and full of enjoyment for those who are able to let their novel observations and experiences occupy their thoughts to the exclusion of the unpleasant features. On every steamer will be found men from every section of the country and from various other countries as well. Not only by participating in or listening to conversations in which the most remarkable experiences are discussed, but in observing the habits and manners of fellow passengers, extending from the highest officials of the government, and men of great wealth and influence, to pure-blooded Indians, often only half civilized, one is never at a loss for mental occupation.

The scenery along the river bank is both beautiful and interesting and is of the most varied description. Along the lower part of the stream there are vast prairies covered with high grasses and sedges and interspersed with greater or lesser areas covered with shrubbery and forest growth. Often it will be a forest of magnificent palms, again a jungle of lovely bamboos, or a swamp filled with tall pampas grass. As we ascend the river we enter a region where the heavy forest growth comes directly to the edge of the stream, its margin being draped with magnificent flowering vines. After the first two or three days, the steamer enters the hill region. Previous to this time, the mountain ranges have been almost continuously in view, both upon the right and upon the left. Now they crowd inward upon the valley and the river begins to dodge in and out among their foothills, occasionally sweeping the very base of a high naked cliff. At La Dorado, we disembark and find a train waiting for us upon the high bank of the river. Here our baggage is taken by some porter whom we have engaged for the purpose and is carried up the bank to the railroad station. At these places one must never trust entirely either to the honesty or the ability of his porter. At nearly every river port there are some porters who will steal unguarded luggage, especially small objects left in their care. They of course charge the theft upon someone else and there is no telling whether or no they are parties to the transaction. Not infrequently also, it will be found that a part of one's baggage has been taken off by some other passenger at a stopping place during the night. Whenever possible, it is desirable to rise at these night stops and keep an eye upon one's luggage. Even then we are not always safe, for deck passengers may cut open our packages during the night, abstract some valuables and repair the damage so that it is not detected until long afterwards. At length we shall find the train moving out from La Dorado and carrying us upon a journey of some fifty miles to Beltram, the river port just above the falls. On the way we shall make a more or less extended stop at La Honda, perhaps being obliged to go to the hotel there and wait for the morning train. This ride is a very beautiful and interesting one, among mighty cliffs and other scenery of majestic character. Above the falls we take a smaller steamer and proceed to Girardot, which is at the head of steamer navigation, except for a very small boat that runs once or twice a week, to Pacificacion, a few miles farther up the river. This part of the journey is against a current that is exceedingly strong and swift and over a rocky channel. hemmed in on both sides by high and rocky banks, or even mountain bases.

When the river becomes too swift and rocky for steamer navigation, we betake ourselves to canoes or rafts. There are comparaitvely smooth places, extending usually for but short distances, where the craft floats gently down the stream or is easily propelled when upon its upward journey. Oars are rarely used. In their stead, the Indians employ huge paddles, their blades three feet in length and having an average width of nine or ten inches. When thrust deeply into the water, their use calls for a tremendous outlay of physical strength. When the craft approaches an outjutting promontory of rock, there is frequently a dangerous whirlpool just above it, where the water is profoundly deep and at the center of which a terrific downward suction is developed. Even a good sized steamer is not wholly safe in such a place and should our canoe be caught within its narrowing whirl, we are very likely to be overturned or our canoe stood upon its end and sucked beneath the surface. Even if we pass the whirlpool in safety, we must not too closely approach the turbulent current that roars around the point. To avoid these dangers, our boatmen must work their paddles with desperate strength and quickness, each pull almost lifting the canoe out of the water. At times, one such curve will succeed another so closely that there is no resting in between. The instant that the boat has escaped the point upon one side of the river, an extreme effort must be made to throw it across so as to escape a similar danger upon the other. At times, when the river is narrow, we shoot downward at express train speed. Ascending the river, such places are passed only at the expense of painful and exhausting labor. Frequently the paddles cannot be used at all, long and strong poles being substituted, or the boat being towed by lines carried on foot along the shore or in the shallow water near it. There are places where it must be taken from the water and carried or dragged overland around the rapids. As a general rule, it takes as many days to ascend as it does hours to descend a given portion of the stream.

The canoes employed are almost without exception dugouts, made by hollowing out the trunk of a huge tree. These are ponderous and unwieldly, but very strong to resist blows against the rocks in the river bed. Even so, it is not a very unusual occurrence for them to be cracked or to be broken sheer in two by the force with which they strike. Rafts, or "balsas" as they are termed, are made of a peculiar wood that is almost as light as cork. It is produced by two species of Ochroma, related to our hollyhock, one being known as black, the other as white balsa-wood. Their trunks are mostly small and they are fastened



RAFTS OR "BALSAS"

together in layers at right angles to one another, until the required buoyancy is secured. For passenger travel, a sheet of slender bamboos or matting is laid across the top. Above this an arched roof is made by bending flexible poles and the whole is covered with a thatch of banana leaves, which affords a perfectly water-tight protection. A short portion of the front is left uncovered to afford freedom of movement in paddling and in performing other duties. Here the simple meals are cooked upon a tub or basin filled with sand. Plantains and cassava root constitute the bulk of the ordinary diet, which is varied more or less with fresh or dried, often half putrid meat. One expects to see much fish eaten, but the river men will not take the trouble to catch them, and appear to care but little for them when obtained. More affluent travellers can easily obtain potatoes, sweet or white, onions, yams, delicious rhacache, related to our parsnip, or in many cases, parsnips, carrots, beets and cabbages. Many forms of native sweetmeats, especially guava jelly, are to be obtained in the village markets. Curious edible tubers are those of species of Oxalis, Tropæolum, and Basella. Turkeys, chickens and eggs are cheap when obtainable. Table luxuries, such as we know, tinned meats, fruits and vegetables, are little known in the interior, the people being too poor to use them. The preparation of canned soups for our meals always attracted a staring crowd, and our evaporated vegetables were regarded as almost a miracle. The throwing away of an empty can was the signal for a grand rush and scramble to secure so rare a prize.

Travelling by night upon these rafts is perilous in the highest degree, and is resorted to only under the stress of extreme necessity. The regular course of procedure is to rise an hour or two before daylight, prepare and eat the morning meal and push off as soon as it is light enough to see. A simple lunch is prepared while the raft is moving. As darkness is coming on, a suitable landing place is found and the craft is securely tied to the trees or rocks upon the shore. Our evening meal is eaten and we spread our blankets under the protecting thatch. The boatmen are not supposed to occupy the sleeping quarters with the passengers and must find such accommodations as they can upon the shore, even though there be no protection against the rain. Very romantic are our experiences during these nights and many are the weird sounds that come to disturb our rest.

The marketing of garden truck and other produce, largely bananas, plantains and oranges, is to a great extent performed by means of these rafts. Sometimes they are very small, barely keeping above the surface with their load of produce and their single paddler. Not rarely we may see the novel spectacle of one or more members of a party, usually the boys of the family, swimming beside the raft, even upon a long journey. When the load has been disposed of, they will make the return journey as passengers or paddlers.

Land travel, by the great masses of the people, is almost all on foot, and the average amount of walking performed in a year by the average individual would astonish our slaves to train and trolley service. A walk to the neighboring village, thirty to fifty miles distant, is not a matter of note, and calls for no other preparation than an early breakfast. The peon will carry his fruits and poultry upon his—more often upon her—back to the market place, as far away as from New York to Philadelphia or Baltimore, with no more concern than would affect one of us in preparing for a walk of eight or ten miles. On any day of travel we will encounter men, women and children pursuing their journeys of a hundred miles or more.

Of course all who can will ride upon horse, mule or donkey. Very often there will be one or two animals for a family, the members of which will take their turns at riding. Occasionally they will double up on a single animal. As we descend the river road, we meet many boatmen walking and carrying their huge paddles. They have taken a loaded raft or canoe down the stream, perhaps two or three hundred miles, have abandoned their craft rather than incur the labor of taking it upstream again, and are now returning on foot for another cargo. They are very business like. They address us politely but shortly, and lose no time, scarcely for an answer to our question, before they hurry onward. When we glance back for another look at them, we may be surprised to find that they have progressed much farther than we upon our riding animal. They are often not only walkers but porters as well, being glad to get letters or small parcels to be delivered, at a very moderate price, along the road or at their destination. The mail service being very scanty, people employ this foot messenger service upon a large scale. On market days, which occur weekly in the smaller towns, the greater part of the produce may have come from points from one to three days' distant. Most of it has come upon the backs of pack animals, but there will be many bales transported by the human porters. If we meet these market men upon the road, we are very rarely able to induce them to part with any portion of their produce, even at an exorbitant advance in price. This man has set out for the market place and he is a slave to his habit. He would rather go there and engage in his usual barter than obtain a larger price by abandoning his journey.

Very often the traveller who rides will be accompanied by a servant on foot who carries a small trunk or valise, weighing up to sixty or seventy pounds.

The experiences of the stranger who traverses these desert or mountain trails upon horse or mule, is varied and interesting but is usually highly uncomfortable or even painful. The lands through which we pass are of varied character. In a single day we may pass through swamp lands, reeking with stagnant water, and filling the air with annoying and noxious insects, rising thence to cross a long, waterless, sandy or rocky plain, where the sun beats down upon us until we reel in our saddles, and where our mouths will be parched and our tongues swollen between the supplies of water. Most of the water in these regions is dangerous to be drunk without boiling, and much of it cannot be drunk at all because of its offensive appearance, odor and taste. Passing through the cattle region, we find that in the dry season the animals are crowded in the vicinity of the streams, the water of which is thus badly polluted. One of the most important cautions that the traveler can observe is that of carrying an ample supply of strong tightly stoppered water cans, provided on the outside with a thick layer of canvas which, by being kept wet, cools the contents through evaporation. Occasionally we will cross a mountain spur or even a range. Here we will usually find our best water supplies, but on the other hand, we shall meet with difficulties, sometimes very exhausting, in overcoming the steep ascents and descents. The traveller has two courses open to him. He may carry his own food, tent

A COLOMBIAN OX-CART

and camping equipment and be independent, or he may stop at the wretched and filthy public places affording travellers accommodation: If he choose the former, he will find it difficult to secure suitable places for his camps. Every place which affords fertility and good water supply is sure to be preempted by inhabitants, and the whole neighborhood will be so filthy that one can scarcely endure the experience of cooking and sleeping there. The moment that he stops and proceeds to make his camp, he is spotted by the over-curious inhabitants and the news is quickly spread. Even in the most sparsely inhabited locality, his camp is sure to be surrounded before meal time has arrived by a crowd of shameless starers who follow every detail of the operations with the utmost vulgarity and who usually endeavor to handle freely the utensils and dishes and even the food with their filthy fingers. If he elects to stop at the public places, he is not much better off. As he enters the outskirts of the village, he finds that observant individuals are awaiting his approach. As he passes along the street toward his hotel, he is followed and surrounded by an ever increasing crowd, that forces its way into the hotel grounds and even into his room, intent upon learning everything possible about the stranger.

Insects are almost always annoying, sometimes seriously so, and their bites are frequently infectious. The food is mostly poor, unless one provides his own the worst feature of it being the want of cleanliness with which it is prepared and served.

The expenses of travel, after one has paid for the hire of his beasts and muleteer, are exceedingly small. Three of us have remained over night at a tambo, although we slept upon the ground, and were furnished with both dinner and breakfast, together with pasturage for our animals, at a total cost of fifty cents. This was the lowest price that I have ever been charged, but a dollar apiece for lodging, dinner in the evening and coffee in the morning, with fodder for our animals, is about what one can expect. His food of course at these rates is very poor, but for a small additional sum, he can obtain poultry and other extras. There will be many times, in the more sparsely settled regions, when one will be unable to obtain any food whatever. He may find a human habitation, but the occupants will not rarely be found without a particle of food of any kind that they can spare.

Sleeping upon the ground or in hammocks or cots is agreeable so far as ventilation and freedom are concerned, but it is difficult to protect oneself against mosquitoes and other flying insects and still more so against those that creep upon the ground. Everywhere the ants are running by millions and even when they do not bite, it is rather disagreeable to feel them crawling over one's body. Spiders are abundant and some of them are quite poisonous.

THE ALUMNI ASSOCIATION OF THE COLLEGE OF PHARMACY OF THE CITY OF NEW YORK

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Vice-Presidents
Curt P. Wimmer
Nelson S. Kirk
Fortunato O. Ghirardi

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Lewis N. Brown - - 115 West 68th Street, New York City

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Bernard O'Malley	Edwin C. Steinach	Hugo H. Schaefer
John Varga	F. N. Pond	Arthur J. Bauer

MINUTES OF THE MEETING OF THE ALUMNI ASSOCIATION HELD WEDNESDAY EVENING, FEBRUARY 13th, 1918.

The regular stated meeting of the Alumni Association of the New York College of Pharmacy was held in the Alumni Room, Wednesday evening, February 13, 1918.

The meeting was called to order by President Weil at 8:30 o'clock.

Those present were:—Messrs. Monroe H. Weil '10, George C. Diekman '88, C. P. Wimmer '06, N. S. Kirk '94, Wm. H. Hoburg '93, F. W. Borgreve, J. H. Hecker '08, E. Steinach '00, Wm. Taylor '13, L. N. Brown '14, R. Frank '16, J. B. Kaufman '15, Chas. Knevitt '16, S. F. Streit '17, M. Finkelstein '17.

The minutes of the preceding meeting were read and approved as correct.

The Secretary read a testimonial to the late Joseph Price Remington.

Treasurer's report:—Treasurer Diekman reported progress.

Report of Entertainment Committee.—Chairman Brown reported that after due consideration the committee thought it most expedient to hold an Alumni Smoker in the near future. A motion was regularly made, seconded and carried that the Entertainment Committee be authorized to make plans for an Alumni Smoker.

Committee on Membership.—Chairman Wimmer made the following report:

To the President, Officers and Members of the Alumni Association of the New York College of Pharmacy:

The Committee appointed to consider the matter of Alumni Certificates begs to report as follows:

1. We recommend that a certificate be prepared and issued free of charge to those members of the class of 1917 who express a desire to receive it.

2. We recommend that any member of the Association who pays fifteen dollars ($15.00) at one time for resident or seven dollars ($7.00) respectively for non-resident life membership be entitled to receive an Alumni Certificate without charge.

3. We recommend that beginning with March 1st, 1918, Alumni Certificates be issued to Alumni Members upon payment in advance of the sum of fifty cents ($.50) each.

Respectfully submitted,
(Signed) CURT P. WIMMER, *Chairman,*
WM. A. HOBURG, JR.

The report was adopted as read.

New Business:—A motion was regularly made, seconded and carried—"That Article VI, Section 3 of the by-laws be suspended for those members who are now in the Army or Navy for the duration of the war." The Secretary was ordered to notify such members.

Chairman Bloom of the Class Committee of 1917 reported progress and was duly thanked by the chair.

The Committee on the Contract for the ALUMNI JOURNAL reported that it had been duly signed by the President of the Association and the Editor of the JOURNAL.

Professor Diekman reported that he had succeeded in having a drawing of a much smaller Alumni Pin which he could have made up if acceptable to the Association.

A motion was made, seconded and carried to have the Treasurer have a die made and also a dozen of these small pins made up.

Professor Diekman offered the following resolution which was accepted by the Association.

WHEREAS—It has come to our knowledge that the founding of a non-secret Pharmaceutical Fraternity, national in scope, whose members shall be recruited from the ranks of the Conference Pharmacy Schools is under advisement, and

WHEREAS—We are informed that one of the proposed objects of the fraternity shall be the furtherance of true professional Pharmacy throughout this Country, and

WHEREAS—This object is in conformity with the aims of our Association, and meets with our full approval, be it therefore

RESOLVED—That we, the officers and members of the Alumni Association of the College of Pharmacy of the City of New York, offer our aid and assistance to those interested in the establishment of the New Fraternity and pledge ourselves to further its interests, and the interests of true professional pharmacy, at all times, and in every proper manner.

Porfessor Diekman delivered a most interesting and entertaining as well as instructive talk on the Edmonds and Hicks Bills.

Ex-President Borgreve spoke to the members on "How they did it in his time."

After some discussion the meeting was declared adjourned.

(Signed) Lewis N. Brown,
Secretary.

DEAN RUSBY'S COLOMBIAN TRIP

The very interesting account of the mode of travel in Colombia, contributed by Dean Rusby to this issue of the Journal, will be read with pleasure by our readers. On March 19, Dean Rusby will again entertain the members of the College and their friends with a continuation of the lecture delivered by him in January entitled "Botanical Exploration in South America." Come and bring your friends. Remember the date—March 19 at 8 o'clock.

DO NOT FAIL TO ATTEND
The Grand Ball
given by the
CLASS of 1919
at the HOTEL ANSONIA, Broadway and 74th St.
Saturday Evening, March 16, 1918

Organized 1897 Incorporated 1902
American Medico-Pharmaceutical League
The First MEDICAL Association in America
to Admit Pharmacists.——Object: Co-operation.
21st Annual Convention at Hotel Astor, Times Square,
New York City, on Monday, May 27th, 1918.
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If you want to sell your drug store—or buy one in any state—or want any kind of position—or need any kind of an employee—or need a Doctor, Dentist, or Veterinarian—write
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COLUMBIA UNIVERSITY

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NEXT ALUMNI MEETING, APRIL 10, 1918

The New York College of Pharmacy

Columbia University

The 89th Annual Term of Instruction of this College,

Open to Men and Women,

will begin on Monday, September 23, 1918

The College offers a course of two years, consisting of three days' instruction weekly, to those possessing the Pharmacy Student Certificate of the New York State Education Department, based on fifteen Regents' counts, or one year's work in an accredited high school, and leading to the degree of Graduate in Pharmacy.

N. B.—Beginning with the fall of 1918 this requirement will be increased to 30 counts or two years of high school work.

As a department of Columbia University, the College offers courses of three, four and six years, of three days' instruction weekly through the academic year, leading respectively to the degrees of Pharmaceutical Chemist (Ph. Ch.), Bachelor of Science in Pharmacy (B. S. in Phar.) and Doctor of Pharmacy (Phar. D.). Admission to these courses is based on graduation from an accredited high school, or the certificate of the Columbia University Committee on Entrance Examinations, or of the College Entrance Examination Board. Candidates for the degree of Ph. Ch. alone, who do not intend to study medicine, will be admitted on a Regent's Qualifying Certificate of 60 counts.

The Trustees award two scholarships for the second year to the two members of the first year class of the college course who stand highest at the final examinations of that year.

The Isaac Plaut Fellowship provides seven hundred and fifty dollars annually, for one year of study at a foreign university, for the Bachelor of Science in Pharmacy who holds the highest rank among the members of his class.

The Max J. Breitenbach cash prize of two hundred dollars and the George J. Seabury scholarship provide tuition fees for the fourth year to the two students standing highest at the close of the third year.

A Summer Preparatory Course of twelve weeks prepares the student in special directions for the regular work of the term.

Evening courses in Pharmacy, Chemistry, Urine Analysis, Microscopy, Bacteriology and Pharmacognosy are given in connection with the Extension teaching of the University.

Those interested will please communicate with

Secretary's Office, 115-119 West 68th St., New York City

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EDITORIAL

WE WONDER

While we are writing this a hearing on the Edmonds Bill is being held in Washington before the Committee on Military Affiairs. Representatives of pharmacy from far and wide are in attendance. Another step is being taken in the endeavor to convince certain officials that the men in the ranks should and must have the same pharmaceutical service they obtain as civilians.

Somewhere we have read a letter from the Surgeon General's office which stated that any attempt to reorganize the medical corps at this time would be disastrous in its results; and then we read that the Surgeon General recommends that the medical reserve corps be reorganized. We wonder why in one case reorganization is desirable and in the other undesirable.

The men in the army are entitled to the services of real pharmacists—they need it—they will get it—there may be some unnecessary delay but our duty is plain. Every pharmacist must continue to help drive the facts home to those army officials who have not as yet seen the light.

The health of our men cannot be properly conserved without a real pharmaceutical corps. The need is plain and we must see to it that the corps is established.

DR. BROWN JOINS THE COLORS

Just as we are going to press, Dr. Lewis N. Brown, instructor in the Department of Pharmacy and Secretary of the Alumni Association is leaving for Washington, D. C., to enter the service of our country.

Dr. Brown will probably "do his bit" along chemical and bacteriological lines in the Sanitary Corps and expects to leave for France in the very near future.

"BLIZZARD" CLASS DINNER

In response to the notices announcing the "Thirtieth Anniversary Dinner" of the "Blizzard" class sent out by Class Secretary George C. Diekman twenty-one members and eight guests gathered around the festive table at Terrace Garden on the evening of March 12th and while renewing old friendships did justice to the following:

A "HOOVERIZED" MENU

Cape Cod Oyster Cocktail
Cream of Celery aux Croutons
Olives Salted Almonds Celery
Filet of Sea Bass a la Windsor
Cucumbers Potatoes Persilade
Sweetbreads with Fresh Mushrooms
sur Cloches
Asparagus, Hollandaise Sauce
Squab Chicken, Maryland Style
Fruit Salad
Water Ice en Caisse
War Cake
Coffee
CORN BREAD RYE ROLLS

When the good things had been disposed of the toast-master called upon the Secretary to read the roll of the departed members of the class and asked those present to rise and drink a silent toast to their memory.

After listening to informal talks by Dr. W. G. Gregory, Dr. J. Diner, Dr. C. P. Wimmer, Dr. J. L. Lascoff, Dr. J. H. Rehfuss and several members of the class those present voted congratulations and best wishes to Dr. Lewis N. Brown, son of Arthur S. Brown, '88 upon his entrance into the service of his country.

Guests present were:—Dr. Willis G. Gregory, Dr. J. Leon Lascoff, Dr. Jacob Diner, Dr. Jacob H. Rehfuss, members of the New York State Board of Pharmacy; Dr. Lewis N. Brown, Dr. Curt P. Wimmer, S. V. B. Swann and John Kiehl.

The following members of the class were in attendance:—W. F. Luneberg, Arverne, N. Y., A. W. Guerin, Morristown, N. J., W. H. Nicholson, Norwich, Conn., August Diehl, Brooklyn, N. Y., F. P. Tuthill, Brooklyn, N. Y., Charles F. Sears, Auburn, N. Y., Emil Weiss, New York, N. Y., Fred H. Plump, Freeport, N Y., Wm. Oettinger, Brooklyn, N. Y., Dr. J. F. C. Luhan, New York, N. Y., F. E. Kalkbrenner, Middle Village, N. Y., Henry E. Eisentrager, New York, N. Y., Charles A. Shine, New York, N. Y., Edward Katz, New York, N. Y., John G. Reevs, New Rochelle, N. Y., C. E. Trautman, Jersey City, N. J., August Volland, New York, N. Y., Dr. Leopold Freiberger, New York, N. Y., Dr. Wilhelm Levin and Dr. George C. Diekman.

Regrets were received from:—Chas. W. Bartlett, Brooklyn, N. Y., Rose Brunner, Brooklyn, N. Y., Louis Wedel, Brooklyn, N. Y., Arthur S. Brown, Sag Harbor, N. Y., Magistrate A. V. B. Voorhees, Brooklyn, N. Y., George G. King, Rochester, N. Y., Dr. Harry S. Miles, Bridgeport, Conn., Chas. F. Keale, Brooklyn, N. Y. and Wm. G. Kugler, East Orange, N. J.

FROM "OVER THERE"

Base Hospital No 8,
American Expeditionary Force, France.

Dear Mr. Costelo:—

Having just finished my Christmas Dinner, an exceptionally good one and to which I did full justice, I think the best use I can make of my time is to write a letter telling you and all the fellows at the store, how happy I have been made by the beautiful remembrances. We have a large Christmas tree in the center of our court yard; last night it was ablaze with colored electric lights, very attractively trimmed, and they sang Christmas carols around it. I wish you could see the really fine dispensary we have here, it is one of the best departments in the hospital, many think it is the finest. I naturally think so and so does Dycoff, who is here with me. We are the only ones in the dispensary and have no one over us except the Majors and the Colonel. The building taken over for our hospital was a large Normal School, built of granite around a large court yard. It is heated; we have electric lighting, very comfortable quarters, shower baths, in fact everything that makes for our comfort. We were given the room that was originally used as the library, for our dispensary, and we fitted it up according to army regulations so as to stock for 10,000 people. I drew the plans for the shelving, dispensary counter, lighting, etc. They were accepted, and the army engineers put things in shape. Our windows open on this beautiful court yard that reminds me of the one in the Apthorpe on Broadway. Most of our physicians have had a chance to go to the front. They go in detachments, that is, four or five physicians and eight or nine nurses go and stay for two or three weeks and when they return another batch goes. They are stationed directly behind the first line trenches and give aid to the fighting men. I had a letter from one of the fellows from the front describing the ceaseless cannon fires and trying to sleep in the sand barracks and saying if one did not like his bunk in the sand shelter he could try sleeping in one of the ambulances, provided he could stand the odor. Major McKermon gave me your packages; he is certainly a wonderful man with the most magnetic personality and has the best feeling and respect of every man in the unit. Personally I am extremely grateful for the many favors he has shown me and we are all delighted that he was given charge of his specialty on the entire front. It is most interesting to watch the natives about here, their wooden shoes make such a noise that one hears them for half a mile, the sound being similar to that made by hitting an empty barrel with a baseball bat. Besides, there is the noise of their heavy two wheeled carts. The usual age of the working women here must be nearly a hundred. It is not an uncommon sight to see a grey haired woman of eighty or over pushing a wheel barrow loaded with market produce. The roads are very good, made of stone and cement, are very hard and wear out one's shoes very rapidly. I have had all of mine hobnailed to save them and I see many of the officers have done the same. Army Engineers have made extensive alterations about the building, put in a new drainage system, installed latest type of lavatories and toilets, built large outside barracks, put up a portable Y. M. C. A., in fact they have made a new town out of this place. In the early autumn several of us were allowed to go to one of the most attractive watering places I have ever seen. We met many charming people, some speaking very good English. Here is an instance of one of the amusing meetings in France. We were walking along the beach at —— when we met a very kindly looking elderly gentleman and I greeted him with a smiling "Bon Jour Monsieur" when he laughingly replied, "Good morning, boys, it's jolly fine weather we are having." You can imagine how we all enjoyed the joke on us. There is much I should like to write to you that would be extremely interesting but Army Regulations and Censorship prevent. If you all only realized how your letters are longed for, you would make them as frequent as possible. With kindest regards to all, I am

Very sincerely,

(Signed) George W. Alliton.
(N. Y. C. P., '11).

PROFESSOR ARTHUR H. ELLIOT

Dr. Arthur H. Elliot died in the Peekskill Hospital, Peekskill, New York, on February 28th, 1918, at the age of sixty-seven. Dr. Elliot was born in London, England, in 1850. After graduating from the Royal School of Mines in 1879 he came to America and received the degrees of bachelor of science and doctor of philosophy in Columbia University in 1881.

In 1885 he was appointed Professor of Chemistry and Director of the Chemical Laboratory at the College of Pharmacy of the City of New York. Since 1896, in which year he became chief chemist of the Consolidated Gas Co., he has been Emeritus Professor of Chemistry at the College. A member of the Board of Trustees since 1900, his name was upon the ballot for re-election when he was suddenly taken away.

JOHN W. CASWELL

At the meeting of the College held March 19, the Secretary announced the death on March 9th, 1918, of life member John R. Caswell, of Newport, R. I. Mr. Caswell was one of the members of the firm of Caswell-Massey and served as vice-president of the College from 1893 to 1899 and again in 1903. He was trustee from 1887 to 1892 and again during the years 1901 and 1902. Mr. Caswell had reached the age of ninety years at the time of his death. The funeral services were held at his home in Newport, R. I.

FROM THE LIBRARY

ADELAIDE RUDOLPH

Assistant Librarian

The small exhibit, that is now found in the showcase, seems to have anticipated the article on the "family medicine chest" that is going the rounds, copied from the *Australasian Journal of Pharmacy*. Says the writer: "The time-honored family medicine chest, good in its way, has been responsible for many mishaps," proceeding to give for a reason: "Old prescriptions are treasured like family heirlooms. Medicine is obtained, the patient feels better after a few doses. The bottle goes into the chest, and some months later another member of the family imagines he has the same symptoms, and he doses himself with the stale, and probably deteriorated remnants remaining in the bottle." This, all by the way, is intended to point a moral to druggists, since they are in a position to do so, to see that people do not refill prescriptions or keep stale medicines in their medicine cases. The moral is a good one, probably, but from our standpoint does not vie in interest with the sentence, "Old prescriptions are treasured like family heirlooms;" for this seems aptly to describe the material on exhibition in our showcase. And so, returning to this, we see that one article is an old, considerably-mutilated-at-the-top, homemade book of instructions, which evidently came from one of these old medicine chests; because its title reads: "A Companion to the Medicine Chest; or, Plain Directions for the Employment of the Various Medicines and Utensils Contained in It; and the Treatment of Diseases." This book is in semi-manuscript form, made on foolscap paper from the small printed book, which bears the title before mentioned, by pasting the printed leaves, as far as they will go, on the foolscap pages, and then attaching in hand-writing whatever appeared on the reverse of the printed leaves with whatever else appeared to the copyist worthy of note. The medicine chest, for which this was made, according to the list of contents, contained fifty-one medicines, also lint, four kinds of plasters, and six "utensils" for the preparation of the medicines. The manuscript is dated. New York, 1837, and is evidently one of the contributions to the Library treasures made by Dr. Charles Rice; for we find a note to the recipe for liquid opodeldoc and the classification number of the manuscript pencilled in Dr. Rice's hand-writing.

The rest of the exhibit in the showcase consists of two manuscript sheets of prescriptions, that were found in a handsomely carved wooden medicine chest, as the story goes, that was bought in France, though originally from England, and placed in a noted antiquarian shop in Copenhagen, Denmark. As these loose papers in the bottom of the chest did not appear to enhance its value to any extent, they were given to a Danish artist, Miss L. Knudsen, who was connected with the shop for a time, and who afterwards brought them with her to New York. She tells me that the sheet of blue paper containing prescriptions for cholera cures, according to the quality of the paper and the character of the handwriting, cannot be placed back farther than 1840-1850, but that the yellow leaf containing recipes headed 5 yrs. (perhaps meaning, for a child five years old?) belongs to an earlier date, 1805-1810.

As giving a curious insight into the uses of such medicine-chest recipe books, common in some countries, I quote from her letter enclosing these prescriptions:

"Now you know even today, if you enter an apothecary shop in Glasgow and give the apothecary a prescription in Latin, he will ask you for what trouble the medicine is to be used. If you say, 'cold,' he will go and get a medicine book and look up 'cold cures.' Then he brings you something different from what your prescription calls for; 'but,' says he, 'it will cure!' At least that happened to me with one I had from Denmark. Now here in the United States a druggist does not do that—he fills it according to the prescription."

Fourteen volumes and one pamphlet have been added to the Library since the beginning of the year. This number includes four gifts:—"The Plattsburger, 1917," with "Compliments of Benjamin Rosenberg, 2d Lt. Inf. U. S. R.," a C. of P. first year man; "A Text Book of Physics and Chemistry for Nurses," "With the compliments of A. R. Bliss, Jr., '07 and '08," joint author, the well-known editor of "The Mask;" and two noteworthy contributions from W. H. Schoff, secretary of the Commercial Museum, Philadelphia—one, a reprint from the *Journal of the American Oriental Society,* entitled, "The Eastern Iron Trade of the Roman Empire," the other, a translation from the Greek, with scholarly and most valuable notes (Phila., 1915), of the "Periplus of the Erythraean Sea: Travel and Trade in the Indian Ocean by a Merchant of the First Century." This is "the first record of organized trading with the nations of the East in vessels built and commanded by subjects of the Western World."

A large box of books has recently been sent in to Professor Arny by Mr. James Foulke, for many years a prominent Jersey City druggist, and also a member of this College. The full set of the publications of the American Pharmaceutical Association from 1881, which it contains, though duplicating our library set, will be a welcome addition to the departmental book collection on the top floor, since, from the library, itself, on the main floor, this is a weary climb that nobody cares to undertake too often during the day.

Library hours, from 10 a.m. to 2 p.m., and from 3 to 5, afternoons, except on Saturdays.

BOOK EXCHANGE COLUMN

Library Has For Exchange

(Continued from v. 23, 1916, p. 230—Nov. No. 11.)

American Journal of Pharmacy—
v. 43-55, 1871-1883; v. 69-70, 1897-98, v. 85, 1913, nos. 1, 2 (2 copies), 3, 5, 7, 8, 9, 10, 11; v. 86, 1914, no. 6; and v. 87, no. 1.

Annalen der Chemie und Pharmacie—
v. 86-88 (bound in one vol.), 1853-54 (v. 86 lacks t.-p., pp. 265-376, & 1 plate, v. 87 lacks all but pp. 129-256); v. 89-90 (bound in one), 1854, (v. 90 lacks 1 plate); v. 91-92 (bound in one), 1854, (v. 92 lacks pp. 1-128); v. 93-94 (bound in one), 1855, (v. 94 lacks plate I); v. 95-96 (bound in one), 1855; v. 97-98 (bound in one), 1855, (complete); v. 112, pt. 1, 1859, (unbound).

Chemiker Zeitung—
v. 4, 1880, nos. 1-52 (lacks no. 53 and index); v. 5, 1881, nos. 1-9, 11-53, (lacks the index); v. 6, pt. 1, 1882, (t.-p. & index, mutilated); v. 6, pt. 2, 1882, nos. 1-47, 50, 51, 53, and index; v. 7, pt. 1, 1883, (lacks nos. 20, 21, 37, 50); v. 7, pt. 2, 1883, (lacks nos. 59, 64, 78, 91, 93, 100, and index); v. 8, pt. 1, 1884, (lacks nos. 11, 19-24, 33, 39, and index); v. 8, pt. 2, 1884, (lacks nos. 54, 71, 99 and index); v. 9, pt. 1, 1885, (lacks nos. 11, 28, 29, and index); v. 9. pt. 2, 1885, (lacks nos. 53, 54, 58, 63, 65-67, 72, 77, 84-86, 88, 93, 95, 97, 103, 104, and index); v. 10, pt. 1, 1886, (lacks nos. 7, 15, 19, 27-52, and index).

Chemisches Repertorium—
14. Jhrg., 1890, (lacks pt. 1); 15. Jhrg., 1891, (lacks pt. 2); 19. Jhrg., 1895, (has only nos. 2-18, 20-22, and index of pt. 2. Pt. 1, complete); 20. Jhrg., 1896, (complete); 21. Jhrg., 1897, (lacks pt. 1); 22-24. Jhrg., 1898-99, (complete); 25.-27. Jhrg., 1901-1903, (each lacks pt. 2).

Wanted

Chemical News—
v. 110, 1914, no. 2873 (Dec. 18), pp. 295-306.

Chemiker Zeitung—
v. 15, 1891, nos. 43 & 93; v. 20, 1896, no. 1; v. 25, 1901, no. 96; v. 38, 1914, no. 17.

Chemisches Zentralblatt—
84. Jhrg. 1913, no. 17, pp. 1485-1560.

Journal de pharmacie et de chimie—
ser. 5, v. 25, 1892, no. 10 (May 15), pp. 489-536; and the volumes for the years 1894 to 1905 inclusive.

Pharmaceutische Zeitung—
v. 58, 1913, nos. 3 & 9.

Year-book of Pharmacy (Lond.)—
the volume for the year 1877.

Zeitschrift-für ang. Chem.—
1891, no. 17; 1892, no. 10; 1893, no. 19; 1896, no. 7; 1898, no. 4; v. 14, 1901, no. 19; v. 18, 1905, no. 40; v. 19, 1906, no. 17, and nos. 19-52 inc.; v. 22, 1909, no. 3; v. 25, 1912, no. 48; v. 26, 1913, nos. 68 and 92; v. 27, 1914, nos. 6, 7, 10, 16-19 inc., 50, 51, 56, 57.

United States Dispensatory—
Editions 2, 3, 4, 6, 9, 10, 17.

ABSTRACTS

Conducted by Prof. George C. Diekman.

Hydroxypyridine and Adenine

The alleged antineuritic properties of hydroxypyridine and adenine were subjected to investigation by A. Harden and S. S. Zilva, who report in *Biochem. Journ.*, 1917, 11. Experiments were conducted with polyneuritic pigeons, and the authors found that when crystalline hydroxypyridine (both needles and granules) was injected into the diseased animals, no cure or even amelioration of symptoms resulted. They likewise found that pure adenine, as well as adenine heated in a sealed tube with sodium ethoxide, for a period of 5 hours at 100° C., was without merit in the cases under observation.

Calcium Cyanamide

This chemical serves a valuable purpose as a fertilizer, it is however difficult to apply to soils, in such manner as will insure best results. Experiments have been made by mixing calcium cyanamide with 15% of its weight of coal tar, and passing the mixture through a mincing machine. The resultant material resembles superphosphate very closely, and can be spread over soils readily and without the necessity of first powdering. Pot experiments with oats and wheat, using this material as a manure, proved conclusively that the tar had no injurious effect. Field trials carried on subsequently confirmed these results. *Bull. Ag. Intell.*, 1917, 8.

Preparation of Vitamine

U. S. Patents, No. 1,235,198, July, 1917. Various organic food products are extracted with diluted alcohol, and the alcohol removed by distillation in vacuo. The resulting aqueous liquid is then treated in acid solution with lead acetate, and in neutral solution with basic lead acetate, in order to remove impurities. After removal of lead the solution may be evaporated to dryness, or it may be further purified by precipitation with an alkaloidal precipitant, decomposition of the precipitate, and resolution of the active constituent. The vitamines thus obtained appear in the form of yellow-brown substances, hygroscopic; and soluble in water, producing solutions which are feebly acid in character. With alkalies they form solutions possessing a yellow color, and the odor of methylamine. The watery solutions precipitate upon the addition of tannin, silver nitrate, phosphomolybdic acid and phosphotungstic acid.

Zinc Perhydrates

The production of zinc perhydrates (hydroperoxides) is described by F. W. Sjostrom, in *Z. anorg. Chem.*, 1917, 100, and *J. Chem. Soc.*, 1917, 112, as follows: If to an excess of a solution of sodium hydroxide containing hydrogen peroxide, a solution of zinc sulphate is added, a total precipitation of the zinc in the form of hydroperoxide is noted. It is difficult however to determine the exact quantity of hydrogen peroxide used, volumetrically, because of the rapid decomposition it undergoes in alkaline solution. Sjostrom, in order to make a more extensive study of the subject, used the following method for the preparation of zinc perhydrate: The calculated quantity of 30 per cent. hydrogen peroxide was allowed to remain in contact with freshly calcined zinc oxide for a period of several hours, at —10° C. The product obtained represented a paste-like mass above 2° C. When dried over soda-lime, on a porous plate, at 35° to 40° C., the product was obtained in the form of a white powder. In the white powder the quantity of active oxygen, water and zinc oxide were determined. Oxygen was found present in amount of 8.04 per cent., corresponding very nearly to the formula $Zn_2O(OH)O.OH$. At ordinary temperatures the white substance was fairly stable when treated with water, alcohol or ether. Double normal solution of sodium hydroxide decomposed the compound only slowly. The investigation, however, seems to demonstrate that the product is not a simple chemical compound, as when triturated with water, fractions which contain varying amounts of oxygen are obtained. Experiments with this preparation in the same manner, but before drying, yielded three fractions, containing each approximately 12 per cent. of oxygen, but no definite chemical formula could be ascribed. Products of a like composition were obtained upon boiling zinc carbonate with an excess of 30 per cent. hydrogen peroxide. The author concludes that zinc perhydrate is a mixture of chemical compounds.

Toxicity of Cottonseed Products

F. E. Carruth, *Journ. Biol. Chem.*, 1917, 32, describes a method for determining the approximate toxicity of cottonseed products. It is known that raw cottonseed possesses highly toxic properties if fed to animals. The presence of about 0.6 per cent. of a plant pigment, gossypol (phenolic in type) is responsible for such action. It is also found that cottonseed meal, obtained by subjecting the seed to hot expression, does not possess this toxic property to so high a degree. This is no doubt due to the fact that gossypol is oxidized into less toxic products during the process of hot expression. When treated with solution of alcoholic potassa, these oxidized products yield a blue color. These oxidation products are insoluble in oil and ether. When the cottonseed is subjected to cold expression, most of the gossypol is removed together with the oil, from which it is however later on destroyed in the process of refining. The presence of unchanged gossypol in the cottonseed meal is readily detected by the deep red color it forms in the presence of concentrated sulphuric acid. To determine approximately the quantity of gossypol present a quantity of cottonseed meal, sufficient to yield about 10 grammes of oil, is extracted with a solvent such as ether. The ethereal solution is allowed to evaporate spontaneously, and the residue of oil mixed with about 10 per cent. of its weight of aniline, after first filtering. This mixture is then warmed by means of a water bath, and set aside.

If a yellow crystalline precipitate is formed, gossypol was present. This precipitate is collected, washed with a mixture of 1 part of ether and 2 parts of purified benzine, followed by a further washing with pure petroleum benzine, and is then dried at 100° C. and weighed. The chemical nature of the precipitate is that of a di-aniline salt of gossypol, $C_{30}H_{28}O_9.2C_6H_5NH_2$. The weight of the precipitate, multiplied by the factor 0.74, equals the quantity of gossypol present in the sample used. If after a period of several days, a precipitate does not form in the liquid which has been set aside, gossypol may be said to be absent. Experiments have shown that cottonseed meal, containing 0.24 per cent. of gossypol, or over, when fed to rats, proved fatal within 10 days. Smaller amounts, while not necessarily fatal, proved injurious to these animals.

Thymol-Mercuric Acetate

Rupp, E. in *Arch. Phar.*, 1917, 255, *J. Chem. Soc.*, 1917, 112, reports on the constitution of hydrargyrum thymol-aceticum. He states that this compound does not contain ionisable mercury and that its correct formula is $HO.C_6H(CH_3)(C_3H_7)(Hg.C_2H_3O_2)_2$, and the substance really is 2.6-diaceto-mercuri-thymol. He bases his findings upon the fact that its mixture with glacial acetic acid and potassium nitrate is converted upon treatment with sulphuric acid in the cold into 2-6-dinitro-thymol. Its decomposition products when treated with hot 10 per cent. sodium hydroxide solution, with carbon dioxide, or with a saturated solution of sodium chloride are described fully. He also states that 2.6-di-iodomercuri-thymol has been prepared. As a method for the determination of the quantity of metallic mercury in these compounds, he suggests the following:—Heat 0.3 gramme of the compound with 5 mils of concentrated sulphuric acid and 1 gramme of potassium nitrate, boiling the solution until it is colorless. Then allow to cool and add potassium permanganate until a permanent pink color ensues. After addition of a drop of hydrogen peroxide solution, the mixture is titrated with N/10 sodium thiosulphate, using ferric alum as indicator.

Chlorates and Hypochlorites

For the purpose of identifying chlorates in the presence of hypochlorites, as for instance in Dakin's solution, F. Wischo, in *Phar. Post,* 1917, 50, *J. Chem. Soc.,* 1917, 112, calls attention to the behavior of these substances when brought into contact with brucine and hydrochloric acid. The author states that a yellow coloration will develop in the cold, when 5 mils of a solution of sodium hypochlorite, of about the strength of Dakin's solution, (practically 0.50 per cent.), is treated with 0.05 gramme of brucine hydrochloride or sulphate, and 5 drops of diluted hydrochloric acid. Upon boiling the color changes to cherry-red. The addition of another 10 mils of diluted hydrochloric acid, and continued boiling produces no change in the color. Contrary to this, a solution of potassium chlorate, of the same concentration, treated with a like quantity of the same reagents, shows no color change in the cold. Upon boiling, the solution becomes yellow, and if the boiling be prolonged, it turns cherry-red. The addition of further diluted hydrochloric acid (10 mils), and continued boiling causes a discharge of the color. This discharge of color after addition of much acid and continued boiling, is characteristic of the presence of chlorates. The test may be demonstrated upon a solution containing in 5 mils, 0.04 gramme of sodium hyposchlorite and 0.02 gramme of potassium chlorate, and treated as above.

Colorimetric Methods for Morphine

A. Heiduschka and M. Paul, in *Arch. Pharm.*, 1917, 255, describe several methods for the colorimetric estimation of minute quantities of morphine. The methods especially studied are, 1st. the Georges and Gascard iodic acid method, and 2nd. the Marquis method. The authors employ a modification of the first method in that they do not employ the Duboscq colorimeter, but prepare a scale of colors in concentrations as low as 1 in 10,000. The solutions are prepared by diluting a faintly acid solution of morphine in N/10 hydrochloric acid. The test is applied by treating equal volumes of these dilutions (10 mils) with 5 mils of a 5 per cent. solution of iodic acid, and examining the yellow coloration after the lapse of one-half minute. The authors state that the variations in color are more pronounced in the more dilute solutions. For the quantitative determination of morphine the method is only available for dilutions between 1 in 1500 and 1 in 5500. The presence of morphine may, however, be detected in dilutions of 1 in 12,500. It is claimed by the authors that the method is rendered more sensitive if 1 mil of 10 per cent. ammonia is added to the mixture, about 5 minutes after the iodic acid is added, and that under such circumstances morphine may be detected in dilutions of 1 in 18,500, and estimated in dilutions of 1 in 5,000 to 1 in 16,500. In estimating morphine by means of Marquis' reagent, one mil of the dilution (same as in other method) is evaporated on the water bath, in a small dish, and the residue obtained treated with 1 mil of Marquis' reagent (3 mils of concentrated sulphuric acid to which 2 to 3 drops of 40 per cent. formaldehyde solution have been added). The resulting violet mixture is washed into the tube used for comparison by means of 4 mils of sulphuric acid. The comparison of colors must be made by transmitted light, the results obtained by reflected light being entirely untrustworthy. In this matter morphine in dilutions of 1 in 1,400 to 1 in 14,000 may be made. Fully ripe poppy capsules, when subjected to tests by these methods, were found to show the presence of from 0.017 to 0.088 per cent. of morphine.

INFORMATION - BUREAU -

Conducted by Prof. H. V. Arny.

GENERAL INFORMATION.

1. Telephone inquiries will be answered cheerfully without charge. Residents of Greater New York or vicinity wishing to inquire about some pharmaceutical problem will ring up the Information Bureau, Columbus 117, and will receive information immediately, if same is accessible.

2. Non-residents will have their problems answered in the next issue of the C. U. C. P. Alumni Journal without cost, if they send their inquiries by mail.

3. Those not wishing to wait for their information until the next issue of the Journal, may have their inquiries *answered by mail by enclosing a self-addressed stamped envelope.*

4. Problems requiring extended research will be handled for a fee as moderate as consistent with high grade service.

5. Translations of articles from foreign languages, either in full or in abstract. as well as transcripts of papers appearing in English or American pharmaceutical, chemical or botanical periodicals will be prepared for those desiring to pay for such service.

6. As in the past, all visitors to the library, desiring to do their own research work, will be given courteous attention.

H. V. Arny, Librarian.
Adelaide Rudolph, Bibliography.
Hugo H. Schaefer, Queries.

ANSWERS TO QUERIES.

Lubricating Jelly.—H. D. K., New York.—The following recipes for lubricating jelly for surgical instruments are taken from the *Druggists Circular,* 1915, pages 421 and 586 respectively.

I.

Take three ounces of Irish moss and wash in running water for one-half hour. Place them in one quart of water and boil in a double boiler for ten minutes, stirring constantly. Pass through fine wire strainer, put the strained jelly back on the stove, sterilize by boiling and finally add enough water to make a jelly of the proper consistence. A mild antiseptic like eucalyptol, may be added.

II.

Tragacanth	3 grammes.
Glycerin	25 mils
Phenol	1.5 grammes
Water, enough to make	300 mils

Mix the tragacanth with the other constituents in a wide-mouthed bottle and shake occasionally until a uniform jelly results.

Names of Manufacturers.—We gladly furnish our querists with information concerning the manufacturers of goods handled by the drug trade, but for obvious reasons, such answers are not published in this department.

Thompson's Linseed Oil Emulsion.—F. R. J., New York.—We published the recipe for this preparation in the JOURNAL for November, 1916, page 238.

Antipyrine Incompatibility.—T. M. V., New York, has received a prescription calling for

Antipyrine	1.0
Phenol	2.0
Syrup of raspberry	15.0
Water enough to make	100.0

He wishes information concerning it. Ruddiman in his book on incompatibilities states that when aqueous solutions of antipyrine and phenol are mixed, turbidity results and an oily liquid settles to the bottom in a few hours. He suggests no remedy nor can we. In fact, we would hesitate about dispensing the prescription.

Magnesia Usta Gravis.—C. T. T., New York.—This is an old name for heavy magnesia or magnesii oxidum ponderosum of The United States Pharmacopœia.

Solution of Iron and Manganese Peptonate.—B. R. J., New York, in making a batch of the iron and manganese peptonate solution of *The National Formulary*, obtained a brownish precipitate on addition to the peptone solution of the solution of ferric oxychloride and of sodium and manganese citrates. He desires to know how to remedy the trouble. We suspect that in "neutralizing" the peptone solution with sodium hydroxide solution he overstepped the mark and that the precipitate was ferric hydroxide. In that event he might be able to make a clear solution by addition of a small amount of citric acid.

Slaked Lime for Opium Assay.—B. G., New York, desires to know how to slake the lime for the U. S. P. opium assay. Had our friend turned to page 537 of the *Pharmacopoeia* he would have found the following statement:

"Lime, Freshly Slaked.—To prepare freshly slaked lime for the Opium Assay, drop upon a convenient quantity of lime one-third its weight of water, cover it and allow it to stand until the lime is slaked and cooled."

"Selenium Colloidal Electrique."—E. C. S., New York.—According to Bourgeant and Szecsi (*Rev. de Therapeutique,* through *Schweiz. Wsch. f. chem. u. Pharm.* 51, 1913, 52) this name is applied to a French preparation usually marketed under the name, "electroselenium." It is recommended as a cancer cure.

Ammoniated Tincture of Quinine.—F. S. J., New York.—This is a preparation of the British *Pharmacopoeia* and the recipe is as follows:

Quinine sulphate	20.0 grammes
Ammonia water	100.00 mils
Alcohol (60%)	900.0 mils

Mix the ammonia water and the alcohol, add the quinine sulphate and shake until a practically clear solution results. Then set aside 3 days, after which filter

"H. Acid."—J. R. H., New York.—According to Thorpe's *Dictionary of Applied Chemistry,* "H. Acid" is the trade name for amino-naphthol-disulphonic acid, $C_{10}H_4(NH_2)(OH)(SO_3H)_2$, in which the four side groups are attached to carbon atoms 1, 8, 3 and 6 respectively. It is an important basic material in making azo dyes.

Thiarsol.—L. M. H., New York.—This, according to *American Druggist* 61,1913,397, is a French proprietary solution of colloidal arsenic trisulphide of the strength of 1 to 2000.

Pulvis Unna.—T. R. M., New York.—By this title, the prescriber undoubtedly meant *pulvis fluens hydrargyri,* a powdered form of mercury, made by rubbing mercury with talcum powder and a little oil of turpentine. In another recipe a 30 per cent. powder is directed to be made by triturating 30 grammes of mercury with 5 grammes of oil of turpentine and 15 grammes of lycopodium until it is extinguished, after which it is diluted with 55 grammes of powdered wheat starch. For further details, see *Year Book of the American Pharmaceutical Association,* 1915, page 210; 1916, page 281.

Turner's Copaiba Test.—M. D. F., New York, desires to know why the test for gurjun balsam in copaiba was changed in the last revision of the Pharmacopoeia. Duessen (*Arch. Pharm.,* 252, 1914, 590) pointed out that while the Turner test; the pink color produced when the copaiba is treated with glacial acetic and solution of sodium nitrite and then layered on concentrated sulphuric acid; was reliable when applied to a distillate from copaiba, it was of little value when applied directly to the balsam itself. For this reason the change was made and in the present (ninth) revision, the Pharmacopoeia directs distillation prior to trying the test.

A Mild Protest.—While we are desirous of making the Information Bureau of genuine value to every pharmacist in this vicinity, we find from time to time, that our pharmaceutical friends are suggesting to people outside of our calling that they write us for trade information, from which they expect to reap monetary advantage—all for the investment of a two-cent stamp. For instance, we had a letter recently from a firm, stating that the Department of Agriculture had ordered its members to stop putting borax into an effervescent salt marketed by them and so they turn to the Information Bureau for advice as to a way out of their trouble.

Our answer was to refer the firm to the monographs on effervescent salts given in the *Pharmacopoeia* in the *National Formulary* and in *Pharmaceutical Formulas* and added that if further information was desired, a professional pharmaceutical chemist should be consulted.

Cumarin in Tonka Bean.—P. M. C., New York.—The average yield of cumarin from tonka bean is from 1.5 to 2 per cent.

Blancard's Syrup of Iron.—B. J. S., New York.—While it is well-known that the pills of iodide of iron have long been known in France as "pilules de Blancard," we fail to find in any of the books in our library any reference to Blancard's syrup of iron. We presume syrup of ferrous iodide was intended, but we should like the opinion of our readers in this matter.

THE ALUMNI ASSOCIATION OF THE COLLEGE OF PHARMACY OF THE CITY OF NEW YORK

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MINUTES OF THE MEETING OF THE ALUMNI ASSOCIATION HELD WEDNESDAY EVENING, MARCH 13th, 1918.

The regular stated meeting of the Alumni Association of the College of Pharmacy of the City of New York was held in the Alumni Room, Wednesday evening, March 13th, 1918.

In the absence of the President and Vice-presidents, Secretary Brown called the meeting to order at 8:30 o'clock and asked John M. Williams to act as Secretary pro tem.

Those present were:—Messrs. Edwin C. Steinach, '00; John M. Williams, '05; J. H. Hecker, '08; Wm. Taylor, '13; Richard Frank, '16; B. W. Sherman, '17; B. D. Bloom, '17; M. Schwartz, '17; L. N. Brown, '14.

There being no quorum present the Chairman declared the meeting adjourned.

J. M. Williams,
Secretary, pro tem.

The next regular meeting of the Association will be held in the Alumni Room on April 10, 1918 at 8.30 o'clock.

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Alumni Day Exercises

Annual Election

Wednesday Evening, 8 o'clock

May 15th, 1918

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N. B.—Beginning with the fall of 1918 this requirement will be increased to 30 counts or two years of high school work.

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MAY 15, 1918

REMEMBER THIS DATE

ANNUAL MEETING OF THE ALUMNI ASSOCIATION

ELECTION OF OFFICERS

ALUMNI DAY EXERCISES

AWARDING OF FIRST YEAR CLASS PRIZES

WEDNESDAY EVENING AT EIGHT O'CLOCK

MAY 15, 1918

THE EXAMINATION OF FOODSTUFFS FOR SAND AND GLASS.

Charles W. Ballard, C. U. C. P. '07

In this timely article based upon the results from the examination of over two-hundred samples of food by Dr. Ballard, in his capacity as microchemical analyst to the New York City Department of Health, proves conclusively that the present "ground glass" scare is uncalled for. Practical methods for testing are given. We wish to call particular attention to Dr. Ballard's microscopical method of distinguishing between glass and other gritty materials.

With the popular mind at extreme tension because of numerous well-authenticated plots by enemy aliens against our government, it needs but a mere rumor or suggestion to arouse suspicion of further schemes of this sort. A simple press article stating that glass had been found in chocolate at one of our camps has been magnified and transformed into a plot of gigantic proportions. In view of past events a plot having as its object the wholesale poisoning of people in a given vicinity might be reckoned as a possibility but that ground glass would be used for this purpose is extremely improbable. It is impossible to use large fragments of glass or very large amounts of the powdered substance without its presence being immediately discernible. In ancient times, when powdered glass was used for criminal purposes, the victim received the substance in small amounts mixed with food, for a considerable length of time. It is doubtful whether small quantities taken at irregular intervals or by chance would give rise to serious effects. More especially is this true if the substance is ingested with various breadstuffs or starchy substances which have a natural tendency to surround irritating bodies in the gastro-intestinal tract. There have been several instances where particles of glass were found in foods, but the fragments were fairly large and the consumer became aware of their presence either immediately or before serious damage occurred. If these fragments were intentionally placed in the food material the method employed was very crude, so much so as to frustrate the criminal intent. Accidental occurrence of glass and other foreign materials must always be considered. Even the most careful individual has had the experience of glass splintering while opening bottles with cork stoppers or crown caps, as also preserve jars with various cover devices. Manufacturers of food products must exercise extraordinary precautions against using materials in which there is the slightest likelihood of glass having entered by accident, for some cases are undoubtedly traceable to carelessness after such mishaps. Lack of watchfulness in this respect is apt to prove costly, damaging the reputation and trade of the manufacturer and dealer irreparably.

Within the past two months the writer has had occasion to examine nearly two hundred samples of various foodstuffs for the presence of glass. Thus far this substance has been found in but very few cases. Particles of sand and grit have been mistaken for glass and the greater portion of the samples did contain varying amounts of sand. A small fragment of sand between the teeth always gives one the impression that the particle is much larger than it really is. Given a foodstuff containing a few grains of sand, with public attention focussed on the possibilities of glass being present, and the layman naturally concludes that glass has been added with criminal intent. A few of the samples submitted for examination were accompanied by glass fragments said to have been separated from the food material. There is no reason to doubt that the complainant has found the glass in these instances but it is significant that a thorough examination of the remainder of all such samples failed to show glass particles of even microscopic size. Considering the many sources from which foods in process of manufacture or preparation may, through carelessness or otherwise, come in contact with broken glass, cases of its actual occurrence in the finished product are surprisingly few. The following incidents serve to show in what unusual ways accidental contamination may occur.

Inspector Holborow during the investigation of a complaint concerning glass particles in crackers, examined the original container in the store of the dealer. The tin cracker box had a glass panel for the display of the goods within and this panel was chipped at one corner. He found that fragments of glass held by the purchaser exactly fitted the chipped places in the panel.

Inspectors Cooney and Dunn, working on a complaint concerning alleged glass particles on the outside of bread, found that the fragments resembled glass in lustre but were flexible. They visited the baking establishment and discovered that the gas jet in the oven was surrounded by a mica mantle, particles of which were easily detached. Laboratory examination of fragments from the bread and pieces from the mica chimney proved that they were identical.

Undoubtedly the great majority of cases if they could be thoroughly investigated would parallel those cited above. The circumstances connected with the collection of a sample by the inspector and the history of the case will often give valuable clues both for laboratory examination and a follow-up investigation by the authorities concerned. It is to be feared that the widespread publicity given the cases where fragments of glass have been found in foodstuffs will cause the criminally inclined or disgruntled citizen or alien to try his hand at this method of causing disaster to his real or imagined enemies. Extensive press articles describing the treatment of poisoning by bichloride of mercury were followed by a rapid rise in the number of deaths occurring from poisoning by this substance. Carbolic acid, tincture of iodine, cocaine and heroin have each claimed attention of many persons who in all probability became acquainted with the poisonous properties of these articles by reading details of their criminal use in the daily newspaper. In many ways publicity may be a danger instead of a boon.

Confectionery and breadstuffs seem to be the chief articles suspected by the public of containing glass; but the suspicion is rarely justified although I have found appreciable amounts of sand in both these materials. The recent sugar shortage played havoc with candy manufacture and factories have had to use sugar of almost any grade. In an effort to supply their trade, some manufacturers have even used crude sugar which upon examination was found to contain 0.25%-0.50 per cent. of insoluble materials, chiefly sand. This sugar was used in the same manner as higher grade sugars had formerly been used and the foreign materials found their way into candies which are just about reaching the consumer at this time and which are incidentally causing unnecessary alarm. Flours and breadstuffs present another angle of the same situation. Recent Food Administration regulations having the force of law compel bakers to substitute other cereals and starchy materials for high grade wheat flour in bread making. These requirements have led to an increased use of whole wheat flours, brans, middlings and low grade flours. Appreciable amounts of sand and grit may be present in these substitutes. Being chiefly intended for use as cattle foods it is not entirely essential that they be thoroughly cleansed. With the possible exception of the comparatively small amounts of flour produced by grinding the grain in stone mills instead of modern steel roller mills, high grade flours are generally free from sand and grit particles. In obeying flour regulations some bakers have employed cattle foods of various kinds as wheat and rye substitutes. Pumpernickle and rye bread made from rye feed is a typical instance. These cattle meals always contain sand and bread containing them will naturally be gritty. In some corn meals recommended as wheat substitutes, membranous tissues of the pericarp were present as hard shining fragments and after baking, such materials became even more gritty. These particles might easily be mistaken for foreign matter. Formerly such chaffy particles were separated from the meal, or if impossible of removal, the materials were used as cattle or poultry foods. In normal times the presence of trifling amounts of sand or grit would excite hardly more than passing notice; now such materials cause alarm and arouse suspicion of even high grade food materials.

Isolation of Glass or Sand in Foodstuffs.

The method employed in separating the foreign material from the foodstuff necessarily depends upon the character of the latter and whether quantitative as well as qualitative results are desired. In a laboratory where questions of embargo or prosecution depend upon the report of an analyst, the element of time is an important consideration and may cause one to employ methods which give rapid results of fair accuracy rather than those of greater length but more exact. For all determinations, qualitative as well as quantitative, large amounts of the suspected substance must be used; for the amounts of foreign materials present, rarely exceed 0.50% and may be infinitesimal. Another point to be borne in mind is that practically every foodstuff will contain minute traces of sand. Amounts too small for weighing on the most sensitive analytical balance will be clearly apparent in a microscopical examination of the material.

Potted Meats, Fish and Fatty Substances.—The material should be separated into small particles or the fibers teased apart. Of the sample so prepared, not less than 100 grams should be extracted with ether or other solvent to remove most of the fat. After extraction, the organic materials in the residue are removed by treatment with concentrated hydrochloric acid with potassium chlorate added in small quantities. When destruction of the tissues is complete the liquid is diluted with water and the sand, glass or other insoluble matter collected by filtration. This adaptation of toxicological technic proves very satisfactory for most foods of animal origin, with the possible exception of cheese. In the case of the latter foodstuff destruction of the organic matter by the above method is very slow. For rapid disintegration of cheese, heating with a mixture of concentrated sulphuric and nitric acids in a Kjeldahl flask gives good results. The insoluble residues in each case are reserved for microscopical examination.

Breads and Baked Flour Products.—If quantitative results are desired, the material should be disintegrated, well dried and the loss of moisture determined. After this preliminary, the breadstuff should be reduced to coarse powder (20 mesh). Large quantities (200-400 gms.) of the sample should be used. The organic matter may be removed by the chlorine treatment described in the preceding paragraph and the residue collected for further examination. A more rapid method but one in which results are not as accurate, consists in boiling the sample with sodium hydroxide solution (10%) for at least two hours. This treatment results in the disintegration of most of the starch and protein. Bran tissues may resist solution but can be separated from the other insoluble materials by either of the methods following. The liquid after treatment with the alkali is reduced to small bulk by careful decantation, the insoluble material washed nearly free of alkali, neutralized by dilute hydrochloric acid and the whole transferred to a large separatory funnel containing chloroform. When the mixture is gently agitated the bran tissues will separate at the junction of the water and chloroform layers while the heavier materials will sink to the bottom of the funnel and may be withdrawn. After evaporation of the chloroform, the sand or glass will be in shape for weighing and microscopical examination.

Flours, Meals and Uncooked Flour Products.—Weighed quantities of the suspected product are placed in a large separatory funnel having a short but wide outlet tube and stopcock drilled with a large opening. About 100 mils of chloroform should be added to the sample in the funnel and the mixture well shaken, after which the funnel should stand in a vertical position for at least three hours. Foreign materials, aleurone and some starch will deposit and should be drawn off into a shallow crystallizing dish. After evaporation of the chloroform, this residue is in shape for microscopical examination. If quantitative data is required, the insoluble and heavier materials should be drawn off into a beaker and the residue evaporated to dryness. Sodium hydroxide solution (10%) is added to this dry residue and the mixture thoroughly boiled to remove the small amounts of aleurone and starch contained. After this treatment the solution is well diluted, the residue collected on a tared filter, thoroughly dried and weighed. This residue may then be used for microscopical examination. Corn meal, on account of the large amounts of fixed oil contained presents difficulty, but this oil may be removed by a preliminary extraction or less completely by saponification during the alkali treatment.

Candy, Sugar Products and Chocolate.—The examination of candies or sugar products without chocolate coatings is very simple. The separation merely consists in dissolving a given quantity of the sample in water, collecting the insoluble materials upon a tared filter, drying and weighing. The residue should in all cases be examined microscopically as low grade sugars always contain considerable fibrous tissue. In the case of chocolate coated confectionery it is advisable to remove the coating and examine the latter separately. Known quantities of the sample are boiled with sodium hydroxide solution (10%) to separate and partially saponify the fat and to remove the starch. While the liquid is hot, decant about three-quarters of the liquid, add a second portion of alkali and boil again. Decant most of the liquid taking care that the insoluble materials are not lost. Add dilute hydrochloric acid in slight excess and transfer the liquid to a large separatory funnel containing about 100 mils of chloroform. After gentle agitation allow the mixture to stand. Sand, glass or heavy materials will deposit at the bottom of the funnel and may be withdrawn for weighing and microscopical examination. This method gives satisfactory results with bar chocolate. The major portion of the fat may be removed by a preliminary extraction, but this procedure is not absolutely essential and adds to the time required for the analysis.

Jams, Preserves and Canned Goods.—The most rapid, although not a very accurate method of removing foreign materials from this class of products is by washing through a coarse sieve (10 mesh). The washings are reduced in bulk by decantation and the remaining liquid with sand or glass transferred to a separatory funnel containing chloroform. The foreign matter will rapidly settle in the funnel and may be drawn off, excess chloroform evaporated and the residue examined microscopically. For accurate quantitative estimations it is advisable to dry and powder the material and then remove the vegetable matter by the action of concentrated sulphuric and nitric acids as described in the paragraph on meats.

Identification of Residues.

Where the residue contains or consists of large fragments of glass, positive identification by physical means can be relied upon. Small particles in a residue, especially clear, sharp sand grains may easily be mistaken for minute glass fragments and lead to serious errors. The analyst cannot be too careful in the examination of such residues for on his report the question of prosecution for criminal intent may rest. Chemical methods of distinguishing between glass and sand are complicated and time consuming. The method employed by the writer is rapid and appears to be certain. It has been used in the examination of all samples suspected of containing glass received at this laboratory in the past three months, as well as numerous test samples made up by myself and containing glass fragments of different sizes and from various sources. Fine sand particles and glass fragments when viewed through the microscope may appear very similar, although sand grains frequently show evidences of erosion whereby the edges are worn way. Pieces of glass are usually clear and sharp edged. However, I have found that many sand particles are clear and possess sharp edges and angles. The behavior of sand particles and glass fragments subjected to microscopical examination using an instrument fitted with a polarizing apparatus appears to be a ready means of distinguishing one from the other. Sand grains in the dark field or crossed prisms stand out in white or often show a beautiful play of colors, blue usually predominating. Glass particles with the same treatment remain dark in the field and no coloration was found in any of the test samples examined. Use of a selenite plate (red ½ or 1) with crossed prisms gives especially fine color effects in the case of sand grains; whereas glass fragments remain of red color in the red field. Use of comparatively low magnifications is advisable and in the routine examinations 16mm. or 8mm. objectives with 7.5x or 10x oculars were used.

The following statistics are given to show how little ground there is for apprehension in this "glass scare". The figures are authoritative, rest upon actual fact, and not mere rumor or presumption and are taken from the laboratory records of analyses performed by the writer since the beginning of the agitation. Among the samples received for analysis are many items from the Federal Food Board of New York City (U. S. Food Administration) and the Police Department, although the greater number were collected by inspectors of the Department of Health either upon complaint or assignment.

Materials submitted	Number of samples examined	Sand present	Sand absent	Glass submitted with sample	Glass found in sample
Sugars and syrups	24	10	14	0	0
Tomatoes	8	5	3	0	0
Meals	12	2	10	1	0
Flours	39	13	26	0	0
Breads	92	26	64	15	2
Jam	9	6	3	0	0
Cheese	2	0	2	0	0
Candy	60	41	15	4	4
Crackers, cake, pie	16	9	6	3	1
Ice cream	4	2	2	1	0
Macaroni	3	2	1	1	0
Oysters	1	1	0	0	0
Peanut butter	3	3	0	0	0
Fish	5	3	2	0	0
Totals	278	123	148	25	7

FROM THE LIBRARY

ADELAIDE RUDOLPH

Assistant Librarian

The 1917 periodicals on the subscription list of the library are now returning from the bindery. There are nineteen of these reported on our accessions book during the last month. No books have been added by purchase, but there has been considerable activity among donors—possibly, on account of the spring house-cleaning proclivities of us Americans.

The "P. & S." with a laudable attention to presenting a clean and shining appearance at all times, is good enough to send in a contribution every few months that helps to keep our files of periodical literature complete. We are indebted especially to the librarian, Mr. A. L. Robert, for this courtesy.

Mr. Caswell A. Mayo, the good chairman of the Library Committee of the Board of Trustees, has also made a valuable contribution of the 1917 volume of *"Annales des falsifications et des fraudes"* complete.

Besides the volumes of the A. Ph. A. publications from Mr. James Foulke's box of books that were reported last month as having been turned over to Professor Hostmann's department, there are five volumes of non-duplicates that the Library is glad to put on its own shelves, especially one of the earlier editions of Coblentz's "Newer Remedies," which, as an interesting matter of College reminiscences, Dr. Arthur H. Elliott, only a week or two before he died, was inquiring about and wishing he could find in our library.

Two well-bound volumes of the *"Kommentar zum Arzneibuch für Deutsche Reich,"* 1895-96, by Hager and others, have come to the Library from the Charles Holzhauer estate; and seven volumes, bound in five, with a manuscript notebook, have been transferred to our keeping from the old Neergaard pharmacy in Sixth Avenue. To Mr. David Costelo, the present proprietor of the store, and Mr. R. A. Konnerth, his assistant, thanks are due for zeal in rescuing these old landmarks of pharmacy in New York from oblivion. Mr. Costelo has also found and is going to give us about twenty of the early volumes of A. Ph. A. Proceedings, which will make the Information Bureau set almost complete. More than that, he offers to pay for any rebinding of the old Neergaard books that may be necessary.

The Danish books with the name of Wm. F. Neergaard written in an attractive foreign hand across the title pages look particularly interesting and excite one's curiosity a bit about the personality of the original possessor. A portrait of "William Neergaard, vice-president of the College, 1865-1870," hangs in the Trustees' Room, and the face has a remarkably kind and benevolent expression, such as would, I think, inspire confidence at once.

Opening the Alumni Annual Reports by chance at the year 1881, we find that at that commencement "an excellent portrait of the late Dr. William Neergaard was presented to the College by the graduating class." Whether the address of the evening in behalf of the Faculty by Douglas Campbell, Esq. aimed in thought at any connection with this portrait I do not know, but somehow, a sentence in it seems to me most appropriate to the impression the face makes upon one:

"Each of you, who lives an upright honorable business life, serves to build up the sentiment, which makes the existence of knaves unbearable. Iago explained his hatred of Cassio, in saying—

'He hath a daily beauty in his life,
That makes me ugly.'"

In this address we also read:

"Fifty years ago the pharmacists of New York resolved to do something to elevate their profession. Something was sadly needed. Anyone was considered fit to deal out drugs, no special training was required, it was a trade, to dignify it by a higher name would have excited ridicule. They concluded to raise it from below . . . That meant the education of the young men who were coming forward."

It was a fine, helpful address, though it is not to my purpose to make further quotations. But Wm. F. Neergaard, who had not neglected the preliminaries of a thoroughly good education, as the type of books which he possessed indicates, must have helped this movement on to a good extent.

It has been pleasing to set out on the top shelf of the showcase two or three relics of New York pharmacy before 1881 that reveal intellectual or artistic traits that certainly must have contributed some impulse to this upward movement. Who of us who looked through the Loan Exhibition last spring has forgotten the beautiful Flemish mortar in Dr. Fraser's choice collection, with its graceful border of dancing cupids! This charming specimen of the bell maker's art purports to have been brought over to adorn the first drugstore in New York. And I believe it. For the Flemish mortar set forth here in our showcase from the old Massey drugstore is hardly inferior in beauty with its spirited hunting scene for adornment.

Near by are a Danish translation of a manual on surgery with the autograph of the elder Neergaard across the title-page, and a neatly kept notebook of William Neergaard, Jr. on a course in pharmacy by Dr. E. R. Squibb, in 1871, and from the same drugstore a pair of scoops, polished and beautifully marked, which were made from the two halves of a cow's horn, and which have been much admired by visiting pharmacists as quite unusual, but peculiarly well adapted for taking up and measuring out powders.

Library hours, from 10 a.m. to 2 p.m., and from 3 to 5, afternoons, except on Saturdays.

ABSTRACTS

Conducted by Prof. George C. Diekman.

Nitro-derivatives of Toluene

T. Kidokoro, in *Kogyo-Kwagaku-Zasshi,* (*J. Chem. Ind., Tokyo,* 1917, 20,) presents the subject in part as follows:—ortho-nitrotoluene is best prepared by adding a mixture of 1 part of nitric acid (S/G. 1.40) and 2 parts of sulphuric acid, (S/G. 1.84), to 1 part of toluene, keeping the temperature at 30° C. for 6 hours, and constantly stirring. The product is washed with water and dilute alkali solutions, and then distilled in vacuo. The yield is about 55.1% of the theoretical. Para-nitrotoluene may be obtained by nitrating 1 part of toluene with 2 parts of fuming nitric acid (S/G. 1.47) at ordinary temperature, for 15 hours, purifying in a manner similar to that employed for the ortho compound. The yield is about 60% of the theoretical. 2-4 dinitrotoluene is prepared by adding 230 mils of nitric acid to 110 mils of toluene, at the ordinary temperature, under stirring. The mixture is then cooled, and 230 mils of sulphuric acid (S/G. 1.84) are added. This mixture is then warmed on a water bath for 30 minutes, cooled to 0° C., and the crystals of dinitrotoluene recrystallized from alcohol. The yield is found to be almost 98% of the theoretical, the melting point of the compound is at 71° C. 2-4-6 trinitrotoluene is obtained by dissolving 40 grammes of dinitrotoluene in 88 mils of sulphuric acid, (S/G. 1.84), and adding 40 mils of nitric acid (S/g. 1.52). This mixture is heated on the water bath for a period of 4 to 5 hours, or until the evolution of gas ceases. The yield represents about 96% of the theoretical.

Foreign Oils in Castor Oil

Since it has been found that castor oil is by far the best lubricating substance to be used for aeroplane motors, the matter of detecting additions of foreign oils has assumed more than usual importance. C. Frabot, in *Ann. Chim. Analyt,* 1917, 22, makes the following observations:—By determination of the acetyl value it is possible to detect the presence of from 1 per cent. to 2 per cent. of added oils. the other physical constants are of little or no value in this direction. When arachis oil serves as the adulterant, to the limit of 5 per cent., the alcohol solubility and the solidification were found to be of most value. It is feasible to determine the turbidity temperature for smaller amounts of added arachis oil. It is found that a solution of 1 volume of castor oil in 95 per cent. alcohol, when chilled to —20° C., remains perfectly clear. The addition of 2 per cent. of arachis oil caused the mixture to become turbid at from —2° to —3° C., while a sample containing 5 per cent. of this admixture, becomes turbid at from +5° to +6° C. Castor oil containing 1 per cent. of arachis oil, when in alcoholic solution, becomes opalescent at from —4° to —5° C., and decidedly turbid at —9° C. The author likewise suggests several methods for the separation of foreign oils from castor oil.

Starch from Decomposed Potatoes

Docomet & A. C. Girard, in *Comptes rend. l'Aced. d'Agric. de France,* 1917, 3, 716-719, publish the results of their observations in the utilization of decomposed potatoes in the manufacture of starch, making the claim that potatoes which have not been subjected to influences which would utterly destroy them, are suitable for the manufacture of starch. Ducomet states that the starch is still in the undecomposed state in the tubers when these are in a deliquescent state, and that it is only in the last stages of decomposition that the starch content undergoes liquefaction. It is entirely feasible to extract the starch content from potatoes which have been attacked by damp rot, independent of what may have been the cause, whether due to frost, mildew or other organism. Starch thus obtained after being sterilized properly, is said to be entirely fit for consumption by man or animal. Partially decomposed potatoes may be kept for a considerable period of time, before proceeding with the extraction of the starch, if they be kept covered with water. The water thus used must, however, be changed frequently. Girard calls attention to the fact that upward of 75 per cent. of the nitrogen and about 90 per cent. of the potash contained in the tubers is made available by the utilization of this water. In agricultural communities these washings may be added directly to the soil, or they may be absorbed by manure heaps. It has also been shown that if this water is boiled, a very considerable amount (over one-half) of the nitrogen is precipitated in the form of protein, which, after sedimentation may be fed directly to stock. The topic presented above in abstract would seem to be of considerable importance in view of the statements concerning waste of foods, appearing in the February 23rd number of the Department of Health Bulletin, as follows:—Under the caption "An Enormous Waste of Food" the claim is made that during the month of January, 1918, foods to the value of $500,000 were condemned or directed destroyed, among which the largest single item was that of potatoes, estimated at over 6,500,000 pounds. It is further stated that there is no provision made at the present time to utilize this waste.

Reaction for Nitrils

S. Dezani, in *Atti. R. Acad. Sci. Torino,* 1917, 52, and *J. Soc. Chem.,* 1917. 112, describes a delicate reaction for the detection of small amounts of nitrils, as follows: A solution of an aliphatic or aromatic nitril, treated with an equal volume of hydrogen peroxide solution (12 vols.), and 2 to 3 drops of a 5 per cent. solution of ferric chloride, upon boiling produces hydrogen cyanide. The presence of this compound is established by means of test papers made by impregnating filter paper with a 1 per cent. solution of picric acid, and drying. Before the test is applied the paper is immersed in a 10 per cent. solution of sodium carbonate. In the presence of a considerable quantity of nitril the test-paper is turned blue, lesser amounts show a red or brownish red color.

INFORMATION - BUREAU -

Conducted by Prof. H. V. Arny.

GENERAL INFORMATION.

1. Telephone inquiries will be answered cheerfully without charge. Residents of Greater New York or vicinity wishing to inquire about some pharmaceutical problem will ring up the Information Bureau, Columbus 117, and will receive information immediately, if same is accessible.

2. Non-residents will have their problems answered in the next issue of the C. U. C. P. ALUMNI JOURNAL without cost, if they send their inquiries by mail.

3. Those not wishing to wait for their information until the next issue of the JOURNAL, may have their inquiries *answered by mail by enclosing a self-addressed stamped envelope.*

4. Problems requiring extended research will be handled for a fee as moderate as consistent with high grade service.

5. Translations of articles from foreign languages, either in full or in abstract, as well as transcripts of papers appearing in English or American pharmaceutical, chemical or botanical periodicals will be prepared for those desiring to pay for such service.

6. As in the past, all visitors to the library, desiring to do their own research work, will be given courteous attention.

H. V. ARNY, Librarian.
ADELAIDE RUDOLPH, Bibliography.
HUGO H. SCHAEFER, Queries.

ANSWERS TO QUERIES.

Blood Tests.—E. F., New Jersey.—Below is given the procedure followed in making the blood tests you desire:

Guaiac Test.—To 5 mils of water in a test-tube add 2 drops of blood. By means of a pipette drop an alcoholic solution of guaiac (strength about 1:60) into the resulting mixture until a turbidity is observed, then add old oil of turpentine or hydrogen dioxide, drop by drop, until a blue color is obtained. In the detection of small amounts of blood the quantity of guaiac used should be decreased (milk, pus, saliva, sometimes react).

Benzidine Reaction.—This is one of the most delicate of the reactions for the detection of blood. Different benzidine preparations vary greatly in their sensitiveness, however. Inasmuch as benzidine solutions change readily upon contact with light it is essential that they be kept in a dark place. To a saturated solution of benzidine in alcohol or glacial acetic add an equal volume of 3 per cent. hydrogen dioxide and 1 mil of the solution under examination. If the mixture is not already acid render it so with acetic acid, and note the appearance of a green or blue color. A control test should be made substituting water for the solution under examination.

The hemoglobin decomposes the hydrogen peroxide (catalysis) and the liberated oxygen oxidizes the benzidine. The sensitiveness of the benzidine reaction is greater when applied to aqueous solutions than when applied to the urine. According to Ascarelli the benzidine reaction serves to detect blood when present in a solution of 1:3,000,000. Walter has also shown the test to be very delicate, and claims it to be more satisfactory than the guaiac test. Lyle, Curtman and Marshall have investigated the benzidine reaction very carefully. They suggest a new procedure in preparing the reagent and in conducting the test: Into a perfectly clean dry test-tube introduce 1.4 mils benzidine solution, add 0.2 mils of water or glacial acetic acid, then 1 mil of the fluid to be tested and finally 0.4 mils of 3 per cent. hydrogen dioxide. Note the appearance of a blue color, which reaches its maximum in five to six minutes.

The acetic acid keeps the benzidine in solution. An excess diminishes the delicacy of the reagent.

Hydrogen dioxide supplies oxygen for the reaction and also bleaches the blue color. An excess of dioxide interferes with the reaction by destroying the catalytic power of the blood and by reacting with the benzidine itself, with the formation of products which appear to have an inhibitory action. It is very essential that the hydrogen dioxide be added last.

The benzidine solution should be dilute. Such solutions are exceedingly sensitive and permit the detection of blood when present in ratio 1:5,000,000.

Benzidine solution may be prepared as follows: Place 4.33 mils of glacial acetic acid in a small Erlenmeyer flask, warm to 50° and add 0.5 gramme of benzidine. Heat the flask for eight to ten minutes in water at 50°. To the resultant solution add 19 mils of distilled water. This solution may be kept for several days without deterioration.

Whitney's Reagent.—T. B. S., New York, asks for the formula for Whitney's reagent for glucose in urine. In the *Druggists Circular* 58.1914.407 we find the following formula said to be very similar to that of the proprietary article.

SOLUTION A.

Ammonium sulphate	1.2 grammes
Copper sulphate	2.6 grammes
Water	50.0 mils

SOLUTION B.

Potassium hydroxide	20.0 grammes
Water	50.0 mils

Dissolve, then add

Glycerin	50.0 mils
Ammonia water (28%)	300.0 mils

Before using, add Solution A to Solution B and make up with water to 500 mils.

In using this solution, a fluidrachm of the solution is heated to boiling in a test tube and to the boiling fluid the urine is added drop by drop until the blue color of the mixture is discharged. It has been arbitrarily determined that when 3 minims of urine discharge the color, glucose is present in the proportion of 10 grains to the fluid ounce, that 5 minims represent 5 grains to the fluid ounce; that 9 minims represent 2 grains to the fluid ounce; and that 17 minims represent 1 grain of sugar to the fluid ounce.

THE ALUMNI ASSOCIATION OF THE COLLEGE OF PHARMACY OF THE CITY OF NEW YORK

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Nelson S. Kirk
Fortunato O. Ghirardi

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Term Expires

1918	1919	1920
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Bernard O'Malley	Edwin C. Steinach	Hugo H. Schaefer
John Varga	F. N. Pond	Arthur J. Bauer

MINUTES OF THE MEETING OF THE ALUMNI ASSOCIATION HELD WEDNESDAY EVENING, APRIL 10th, 1918

The regular stated meeting of the Alumni Association of the College of Pharmacy of the City of New York was held in the Alumni Room, Wednesday, April 10th, 1918.

The meeting was called to order by President Weil at 8:30 o'clock.

Members present were: Messrs. A. Henning, '76; Geo. C. Diekman, '88; Jeannot Hostmann, '96; C. P. Wimmer, '02; J. M. Williams, '05; M. H. Weil, '10; S. Siegel, '14; A. S. Freidman, '16; P. D. Bloom, '17; M. Schwartz, '17.

The minutes of the preceding meeting were read and approved.

Treasurer Diekman reported that the finances of the Association are improving.

Registrar Hostmann reported that he is preparing a list of all members who have entered the service.

Chairman Diekman reported progress on the matter of buying Alumni pins.

The motion to suspend Article VII, Section 5 of the by-laws and to hold the election on May 15th, 1918 was made, seconded and unanimously carried.

Chairman Diekman of the Nominating Committee made the following report:

New York, April 10th, 1918.

To the Officers and Members of the Alumni Association:

Dear Sirs:—

The Nominating Committee, appointed by President Weil, met in the Alumni Room on Thursday evening, April 4th. Present:—Adolph Henning, John M. Williams and Geo. C. Diekman, Chairman.

After due consideration the following named members of the Alumni Association are suggested to be placed in nomination:—

For President	Curt P. Wimmer
" First Vice-President	Nelson S. Kirk
" Second Vice-President	Fortunato O. Ghirardi
" Third Vice-President	Paul D. Bloom
" Secretary	Miss Fanchon Hart
" Treasurer	George C. Diekman
" Registrar	Jeannot Hostmann
Executive Board, term expires 1921:	
	J. M. Williams
	Chas. W. Ballard
	Vito Calcagno

Respectfully submitted,

(Signed) A. HENNING,
J. M. WILLIAMS,
GEO. C. DIEKMAN, *Chairman.*

A motion to accept the report of the Nominating Committee and discharge said committee with the thanks of the Association was made, seconded and carried.

A motion that the Secretary send to Prof. H. V. Arny a letter of regret from the Association that there was no quorum present to hear his lecture on "War Chemistry" was made, seconded and unanimously carried.

President Weil appointed Dr. Curt P. Wimmer, Chairman of the Entertainment Committee, to make the necessary arrangements for Alumni Class Day. A motion was made, seconded and carried to expend not over $125.00 for First Year Prizes and Entertainment.

On motion, Mr. Adolph Henning was appointed a committee of one to purchase First Year Prizes.

Mr. Richard M. Timmermann of 802 Lexington Ave., New York City, was elected to Life Membership.

The following bills were read and ordered paid:

To Schwebke & Knerr, March 8, 1918—$5.25 for postals.

To Schwebke & Knerr, April 6, 1918—$5.25 for postals.

On motion the meeting was declared adjourned.

(Signed) J. M. WILLIAMS,
Secretary.

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NEXT ALUMNI MEETING, JUNE 12, 1918

The New York College of Pharmacy

Columbia University

The 89th Annual Term of Instruction of this College,

Open to Men and Women,

will begin on Monday, September 23, 1918

The College offers a course of two years, consisting of three days' instruction weekly, to those possessing the Pharmacy Student Certificate of the New York State Education Department, based on thirty Regents' counts, or two years' work in an accredited high school, and leading to the degree of Graduate in Pharmacy.

As a department of Columbia University, the College offers courses of three, four and six years, of three days' instruction weekly throughout the academic year, leading respectively to the degrees of Pharmaceutical Chemist (Ph. Ch.), Bachelor of Science in Pharmacy (B. S. in Phar.) and Doctor of Pharmacy (Phar. D.). Admission to the three-year course is based on graduation from an accredited high school or on a Regents' qualifying certificate for 60 counts; to the four and six year courses, on a Regents' Qualifying Certificate for 72 counts.

The Trustees award two scholarships for the second year to the two members of the first year class of the college course who stand highest at the final examinations of that year.

The Isaac Plaut Fellowship provides seven hundred and fifty dollars annually, for one year of study at a foreign university, for the Bachelor of Science in Pharmacy who holds the highest rank among the members of his class.

The Max J. Breitenbach cash prize of two hundred dollars and the George J. Seabury scholarship provide tuition fees for the fourth year to the two students standing highest at the close of the third year.

The Trustees also award three cash prizes of one hundred dollars each, for special proficiency in chemistry, pharmacy and materia medica, to members of the second year class.

The Louis Dohme prize consists of one hundred dollars in cash for special proficiency in pharmacognosy.

The E. R. Squibb prize consists of one hundred dollars for special proficiency in analytical chemistry.

The Pace Prize consists of fifty dollars for highest proficiency in pharmaceutical accounting.

A Summer Preparatory Course of twelve weeks prepares the student in special directions for the regular work of the term.

Evening courses in Pharmacy, Chemistry, Urine Analysis, Microscopy, Bacteriology and Pharmacognosy are given in connection with the Extension teaching of the University.

Those interested will please communicate with

Secretary's Office, 115-119 West 68th St., New York City

C. U. C. P. Alumni Journal

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JEANNOT HOSTMANN, Editor

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ALUMNI DAY

Alumni Day exercises took place on the evening of May 15. An account thereof will appear in the June issue of the Journal.

WE ARE GOING TO WIN

"The principles of the world are in danger and the principles of the world will not be secure until this war is won by America and her allies." These words were used by Mr. Prendergast in his address to the graduates on commencement night. The war will be won and barbarism and autocracy will be laid in the dust forever.

Just so as this war must be won so the fight for recognition of pharmacy as a profession in the army must be fought to a successful finish. The medical officers of the army must and will be convinced. It is a duty every pharmacist owes his country to fight for recognition of his profession.

We quote from a recent letter from the National Association Boards of Pharmacy. "It is well known in civilian life that the free exchange of ideas between physicans and pharmacists—a mutual cooperation and understanding—is absolutely essential for the welfare of the sick. They are—in civil life, in a position to discuss freely, incompatibilities, modes of administration, etc. This very important feature conducive to efficiency, does not exist in the United States Army. The pharmacist, being a non-commissioned officer, is prohibited this freedom of frank exchange of knowledge with a physician, who is a commissioned officer. This being one of the inflexible rules of military discipline." Keep up the good work. We must win. We will win. The health of "Our Boys" in the army must be preserved, We must be the preservers.

Eighty-Eighth Annual Commencement

The Eighty-eighth Annual Commencement Exercises were held at Carnegie Hall on Thursday evening, May 16, 1918. The graduating class was conducted down the main aisle by Frederick K. James, Chairman of the Examination Committee of the Board of Trustees.

After Divine Blessing had been asked by the Reverend Doctor Robert Hugh Morris, Pastor of the First Presbyterian Church, Stamford, Conn., Professor William Henry Carpenter, Provost of the University, who conducted the exercises, introduced President Butler who spoke as follows:

Mr. Provost, Trustees, Members of the Faculty, those who are about to graduate, Ladies and Gentlemen:

My part this evening is a very simple, yet a very welcome one. The address to the graduates will be delivered in a few moments by a distinguished citizen and orator, and he will bring to you a message suitable to this occasion in your lives and to this moment in the history of the United States. It is for me only to say a few words of greeting and to emphasize, if I may, the significance and the importance of this hour in the lives of these young people who have finished their preliminary training. These graduates are going out as public servants. They have chosen a calling and a profession that is in high degree scientific and that closely relates itself to the health, the happiness and the welfare of the people. These graduates are allied to the doctor, to the health officer, to the trained nurse, to the sanitary scientist. They are allies all in making this a better, safer and a healthier world for us to live in.

The weighing out and the putting together in scientific combination of those small elements which make something that when taken into your body or mine, helps us to resist disease or cure unfavorable symptoms, or increase our comfort—the power, the knowledge and the ability to do that constitute a public service. And these Graduates in Pharmacy are public servants. Their calling is not one that leads to great opportunities of wealth. Their calling is not one that necessarily attracts wide public attention, but their calling is one, without which the life of health and happiness that you and I lead would not be possible. So I want these graduates to realize that while they have been studying the principles and practice of pharmacy, they have been preparing to serve the public quite as much as though they were chosen to responsible office or as though they had been drawn to serve in the army or navy of the United States.

There are all kinds of service, my friends: some are spectacular and some modest; some are richly rewarded and some without great compensation. But this City, this State, this Nation could not dispense with any of that service, and the pride of this College of Pharmacy is that now for wellnigh a hundred years, it has been sending out graduates who are well trained, well tested, and who consider themselves public servants.

Then, too, these graduates are going out to take up the practical work of life at the most extraordinary moment in all history. They are going out at a time when what one does, what one says, what one is, counts for more,—be it for good or evil—than has ever happened before. The world today is looking at everyone to see what he is doing; what his attitude is toward the great question of the moment. Shall this world remain a place in which you and I can live and wish to live, and one that we shall be free to live in? That, my friends, as you know full well—many of you because the call has come to the young men of your own families—that you know full well is the question that is pressing for answer from the free nations of the world. When I look at the distinguished service roll of this College as printed on the program that I hold in my hand, I am doubly proud, gentlemen of the trustees, of the splendid tradition and the ideal that you have given to the College of Pharmacy. The College of Pharmacy did not wait, it did not have to be told, it did not have to be urged, it saw and understood the obligation which rested upon it, its students, its alumni, its officers and teachers each to take his place where he could do best and most for the great cause.

Oh, my friends, if we should fail to understand, if we should fail to act as duty calls us to understand and to act, this would be a strangely different world and one that we could not understand and one in which our freedom would be lost. So when I say that these young men and women, well trained in their science and art, are going out as public servants of a great City, of a notable State, of a famous Country at this critical juncture, that means this: It means that first and foremost come the obligations of citizenship in our free America; before our profession, even before our personal interests, before anything that we can think of, comes the obligation of American citizenship. And as this group of ours shall respond to that demand—and how well they will respond, I am wholly confident—according as this group of ours responds to that demand, their history will be written by those who come after.

This is a time when we are of necessity serious minded. It is difficult to say jesting things and light words to a public audience at an hour of this kind. There is too much suffering, too much sorrow; there is too much sacrifice going on in the world. Our mood is a mood of high seriousness as our training is one of sincere scientific endeavor. So here tonight, we are to link the two. We are to link the results of our scientific study with the serious purpose of citizenship and we are to give our greetings, our words of counsel, our cheers and our prayers to these young people who are going out into this profession that they have chosen, with the blessing and the benediction of the College of Pharmacy of the City of New York.

I congratulate them one and all upon the opportunities they have enjoyed and upon the use they have made of the opportunities and I congratulate this splendid College that adds this fine company of the youth of New York to its long roll of men and women trained to high purpose and good citizenship.

Secretary C. W. Holzhauer then presented 120 members of the class and President Butler conferred upon them the degree of Graduate in Pharmacy. The list of graduates is printed on page 75.

The address to the graduates was delivered by the Hon. Wm. A. Prendergast, who said:

Mr. President, Mr. Provost, Gentlemen of the Board of Trustees, Ladies and Gentlemen:

It is indeed a privilege to have the opportunity to say a word of congratulation to this numerous class of graduates of the College of Pharmacy.

In common with everyone here, there is in my heart the thought that we are all very happy because there are people among us tonight who have accomplished something; who have completed a task; who have finished the thing they set out to do; who have shown that they could not be deflected from the task they had essayed to fulfill. This thought is a most wholesome one, because it is an encouragement to everyone to believe if he has his mind and heart set upon a thing to be accomplished. especially for the sake of his country and the community, if he will only persevere, if he will only have fortitude, he can be successful. Most of those who fail in life are those who for some reason or other come to the conclusion at some period, that their day is done; that they cannot succeed; that somehow or other, they have not in them that which will enable them to win. My friends, that is one of the most disheartening moments that can come to any of us,—to feel that we cannot win. In this atmosphere, however, especially at this time, impelled by the tradition of the great University under whose auspices these Commencement exercises are held, we should feel that there is nothing we need fail to do if we have a right to attempt it and only the will to accomplish it. All this has been done by the graduates of this class. That is why we join in a happy note tonight and we all say to them: "Well done, good and faithful servants, enter thou into thy reward." And what is that reward? It has been depicted in fine language by the President. Their reward is to serve; their reward is to give to the community the benefit of their experience and their knowledge. And no better opportunity comes to anyone than to be able to serve. To have the chance to serve, to have the chance to do something—not for one's self, but to do something for one's fellows. If everyone were inspired by the belief that what we do will be of some help to others, there would never be a pessimist. It is only because we fail to hear that note that we become disheartened. And these graduates are now going out to serve where they are needed at the most critical time in the history of the world.

What a splendid thing it is to know that there have been men of forethought who have realized that the day was coming when efficiency would be necessary to the saving of the world! There have been those who have sneered at efficiency, who thought we could all follow the easiest way, that things would come to us if we only looked for them long enough. We appreciate now that the work of the day has got to be done by those who are efficient, by those who have availed themselves of knowledge and information that will enable them to do things. And we have also come to another realization. That is, that there is no one who is so unimportant a part of this great world that his services are not required. There is no one, inconspicuous though he may be, who cannot be made a most useful instrument, because there is need for the services of all people. And how satisfactory it is to know that this University is sending forth men and women who are fitted,—fitted for what? For the preservation of the world's principles. The President of the University said that this is no time for jest; that our thoughts are all on the plane of high seriousness, because our thoughts are all upon one subject. They are upon the subject of war. We are absorbed by it, we think of nothing else. Why? Is it because we like war? No! Is it because we believe in war? No! No one likes war except the barbarian. Civilized people abhor war. They only resort to war in order to protect civilization, and when it is necessary to protect the rights of civilization, war is justified. Do we relish war because of the zest it gives us? No! Do we relish war as the hunter enjoys the hunt? Not at all. That is not the nature of our people. We welcome the opportunity before us to settle war, forever, let us hope. And if we can do that, what a great service will be rendered to humanity!

How important the work of these graduates in this tremendous struggle that is going on all over the world! Why are our thoughts upon a plane of high seriousness? Because we believe that the principles of the world are in danger. Is this too strong a statement? I think not. The principles of the world are in danger and the principles of the world will not be secure until this war is won by America and her allies. (Applause).

Today I had the very great privilege of listening to a speech made by the directing genius of the American Red Cross, Mr. Henry P. Davison. He had just landed from the steamer that brought him from Europe, where he had been to supervise the work of the Red Cross. He said in terms that I wish you could all have heard, he said it in a way that I wish you could all have perceived, that there was serious work to be done; that the situation upon the other side is serious. Those were his very words, "The situation is serious." But because the situation is serious, that does not mean that we are not going to win the war. It means that we must realize the work that we have got to do. What is this work? It is to secure for ourselves and posterity the benefits of civilization; to wipe out, if it be possible, the work of those who are opposed to human liberty. After all of the sacrifices that have been made for human liberty, after all that this nation itself has endured for promoting the cause of human liberty, we thought that cause was secure, we thought it was firmly established. We thought it was so firmly established that it could not be uprooted until about three and a half to four years ago, and then we realized that human liberty still had great battles to fight if it was to be ultimately the policy of the civilized nations of the earth. Liberty,—what a beautiful word! Liberty,—how sweet! Liberty,—that purpose for which men have suffered and women have offered all that was best in them and all that was dear to them! There is no other word that in a political or civic sense means so much to us as Liberty. And why is Liberty in danger? Because there are those in the world who believe that they have a right to rule if they can only secure the physical power with which to impose their will upon all peoples. That is the great issue before the world today. Will it prevail, or will human liberty prevail? It would be more pleasing, much more pleasing to me if I could stand here and say to you tonight, "Human liberty is safe; there is nothing to fear. Our cause is won, our success is assured." But, ladies and gentlemen we must be candid with each other and with ourselves. That statement cannot be made at this time. It might have been made with some show of force and strength and verity a year ago to a greater extent than tonight. But even this does not mean that we are not ultimately going to prevail. It is a great thing to live in these times; to be a part in all that is transpiring. What has changed the situation in a year? We had no idea that the great Russian nation would. within a period of twelve months be under the control of the enemy of civilization, but in effect that is the case. And what does this mean? It means more than was at first generally supposed or the public understood and appreciated. It means that Germany, starting out years ago to establish a great Germanic state had no idea that her ascendency would prevail over Russia. But that is what has happened. And what is more, it means that great states—great in extent of territory and in political usefulness—of Asia are now many of them subject to the same influence. It means that Germany, intent upon her dream to establish her empire in Asia, to divest Great Britain of her power in India, is nearer to the accomplishment of that purpose than she has ever been before. With Russia divided, with the states of that former empire and those territories that were under its influence, now free to do as they will—some of them will undoubtedly come within the despicable influence of the German Empire,—the road that she anticipated she would have to travel to India is no longer necessary. She can find another road through Asia. But what is the additional significance of the situation? It may be if her dreams are fulfilled that her empire will extend into Asia as well. Remember that many of the peoples of Asia are Mohammedans. Remember that Turkey is the ally of Germany. Think of the possibilities of the impulse to an amalgamation of these religious interests throughout Asia. I need not expand upon this point. I think I have said enough to indicate that the Allied nations today have before them the greatest task in history. What stands between civilization and despotism? What stands against the realization of the Germanic dream? Britain, France and Belgium, Italy and Portugal and the United States of America have got to redeem the world, and that is why everyone has his task to perform at this time. That is why these graduates, nurtured with useful knowledge have a greater opportunity before them today than they would have had in other periods. What is this task we have got to perform—that we *must* perform? The preservation of human liberty! Liberty will not be preserved by a compromise of principles or issues. The defeat of the German dream is only possible through victory. Victory in battle. To admit any other plan of settlement means that we would lose in fact, because the compromise that would take place under any other form of determination would leave civilization and human liberty in worse case than they are today—would leave us with nothing to look forward to but other wars impending from year to year. Why do we want this victory? We want this victory for the sake of human liberty, but we want it for another pregnant reason. We want it so that we may have an opportunity to sit at the council table and there readjust the world. Readjust it in what way? For our own aggrandizement in territory or material wealth? To see that other nations profit by this war? No! That is not our purpose. That is not why we desire victory. That would be a poor, sordid fulfillment to look forward to. We want victory so that liberty will be secure everywhere; so that all nations will know their rights and that there will be such a compact between the principal nations of the earth that the rights of all nations will be respected; that people everywhere will be permitted to work out their own destinies, according to their own traditions and national impulses. We want this victory so that we may re-establish justice, the justice that promotes civilization, that makes us free, gives us fairer, broader opportunities before the law and among our fellows. That is why we want victory. That is why victory must come. I am certain that ultimately there can be only one conclusion to this struggle and that those principles which we have always regarded as the right and pure ones must prevail throughout the earth. To this great object, to this one purpose each and every one of us in his way, be it great or small, must eternally dedicate himself.

The Alumni Association prizes were awarded by President Monroe H. Weil to the following: Miss Selma Temliak, Gold Medal and Philip Tishber, Silver Medal. The winner of the Bronze Medal, Mr. Nathan Miller, was not present to receive the same. Mr. Miller received his call to report at Fort Oglethorpe on the morning of Commencement Day.

After reading the roll of honor students (see page 78), Prof. John T. Kennedy awarded the J. Leon Lascoff prizes.

Prof. Curt P. Wimmer then awarded the Trustees' Special Prizes of $100.00 each to the following successful candidates: Pharmacy, Mr. George Andrew Schumann; Materia Medica, Miss Pauline A. Reiter; Chemistry, Mr. Jacob Sugarman. Mr. Edward Yanket and Mr. Henry Rosenberg occupying the first and second places on the first year class Roll of Honor, received the Trustees' Second Year Scholarships.

Prof. Jeannot Hostmann spoke as follows: Insofar that this is the first awarding of the Edward R. Squibb and Joseph Weinstein prizes I will burden you with a few explanatory remarks concerning them.

Fifty years ago Dr. Edward R. Squibb was Professor of Pharmacy in our institution. At the same time and for many years after he was engaged in the manufacture of high grade pharmaceutical chemicals. Dr. Squibb was a pioneer in his line. The output of his factory was standardized many years before purity rubrics were introduced into the Pharmacopoeia.

During the past scholastic year Mr. Theodore Weicker a graduate of our college and a member of the Board of Trustees informed the latter that the firm of Edward R. Squibb & Sons of which he is a member wished to offer annually a prize of $100.00 to that student most proficient in practical analytical chemistry. This prize, it now becomes my pleasant duty to award to Miss Selma Temliak.

Joseph Weinstein received the degree of Doctor of Pharmacy in Columbia University in 1906. Devoting his time to the practice of clinical chemistry, he was ever actively interested in everything that was of benefit to retail pharmacy or his alma mater.

As a mark of esteem his fellow-members of the New York Retail Druggists Association, of which the deceased was the founder, have instituted the Joseph Weinstein Prize, a compound microscope to be annually awarded to the student making the best record in analytical chemistry during the second year who is not the recipient of any other prize.

I take pleasure in presenting the Weinstein Prize to Mr. Anthony Armentano.

Dean Rusby now presented the Lillian Leiterman Gold Medal and the Italian Pharmaceutical Association Gold Medal to Miss Selma Temliak and the Dohme prize to Philip Tishber.

Miss Selma Temliak then delivered the valedictory address:

Upon me has been conferred the honor of giving utterance to the last few words,—those words which must draw the curtain upon the brightest scenes of our early lives; those words which carry with them a blessing and a prayer; those last sweet words, fare thee well.

Honorable Gentlemen of the Board of Trustees:

As the class of '18, we extend to you both our greeting and our farewell. A greeting, the more warm since in this hour when we feel most intensely that true happiness which springs from the consciousness of a task well completed, we are first meeting with you, the silent men who have laid the foundation for the culminating events of this honor.

As each year glides by, you listen to the departing words of a new group of students who have been plucking the fruits of your paternal labors and forethoughts. These successive classes have stood before you for a few brief moments and then the sails of their frail barks have scattered far and wide across the great ocean of endeavor. So we come before you tonight, soon to scatter as fading specks upon the wide horizon. We appreciate your kindly, quiet, disinterested interest in our welfare, and believe that you will find an ample reward for your unselfish service in the consciousness that success has been attained. May you yourselves attain life's noblest end is our most earnest wish. Farewell!

Honorable Dean: We well know how fully you realize that the most valuable asset of the American nation, and indeed of every nation is its citizenship. You have faithfully and skillfully put forth every effort in your power to make true American men and women of the raw material placed in your hands for the building, of this class of graduates. You have taught us the lessons of a life devoted to a noble purpose. Throughout the process of building, you have kindled aspirations for a definite and noble object in life. Now with but a few moments to linger in these halls, we turn and express to you our deepest appreciations for implanting in our minds and in our hearts your own noble principles and ideals. We sincerely trust that the years to come may demonstrate to your satisfaction, as well as to our own, the fruits of your efforts to turn out into the pharmaceutical world American men and women of intelligence, integrity and industry.

Esteemed and Beloved Lady and Gentlemen of the Faculty: To you has been given the task of impressing directly upon our minds, and implanting in our hearts the seeds of knowledge and wisdom. The present occasion plainly indicates how well and faithfully and the future will prove how successfully you have labored in our behalf. You constitute one of the strongest links in the chain of the world's progress. You are directly responsible for our highest attainments in the profession that we have chosen.

Out of the black magic of the alchemist, out of their meagre pharmacopoeia, out of their imperial search for action and reaction, your profession has skillfully brought before us this new and creative science of modern pharmacy. We have for two long—yet shortseeming years relied upon your wise guidance and sought that counsel and assistance which you have so ably and willingly bestowed. At last the time has come when we must march our little crafts away from the ship-yard, away from their master builder's hands and sail away where safety and success must be found in self-reliance. We are now off for a new battle, with none to guide and assist, and we feel heavily indebted to you for your helpful and sympathetic guidance in the years now closing. With your final message ringing in our ears, we are made to feel that in you we may continue to find accessible friends and advisers. Farewell!

Fellow students: We are tonight under the influence of two great forces, memory and hope! Memory, as we look back over the years now ending and hope, as each one stands questioning his own future. We have reached, not the end, but the commencement of a new life, charged with responsible undertakings. Let us start right! Let us mark out for ourselves a new and shining pathway, then let us follow it faithfully. Our honorable instructors have set for us a broad, strong, substantial foundation. It now remains for each of us to erect upon it his own edifice. And as our work progresses and as we begin to reap our respective harvests, let us not forget that "Whatever a man soweth, that also shall he reap." Whatever may be the nature of our own particular harvest do not forget that sometime and somewhere we must ourselves have sown the seeds.

With cheers of loyalty to our Alma Mater and bound by the ties of a kindliest thought, purpose and spirit in working together for the common good let us now breathe that inevitable word "Farewell."

After benediction had been pronounced by Dr. Morris the exercises came to a close.

ONE HUNDRED AND SEVENTY-FIVE

A new service flag is flying from the balcony of the College building. Three large blue stars with the figures '175' tell the tale. One hundred and seventy-five of our boys have answered the call.

One gold star has been placed on the field of red in honor of Albert S. Cooke, '98, who has made the supreme sacrifice, having been killed in action in far off Mesopotamia.

OUR HONOR ROLL

1897

Capt. William A. Scruton

1898

*Albert S. Cooke

1905

Joseph Zrubeck, Jr.

1906

Capt. Henry W. Lehmkuhl
Joseph D. Scheuer
Major Eide F. Thode

1907

Howard D. Goring
William A. Towner

1909

James J. Brady
Benn Windt

1910

Elmer Auchenpaugh
Earl W. Blake
Serg. Ephraim Freedman
Jacob Gold
Lieut. Harry B. Hansen
Lieut. Alvin E. Kuhlman
Lieut. Armin V. St. George

1911

Serg. George W. Alliton
Joseph Bongartz
Francis J. Brannigan
Louis B. Costa
Serg. William H. Doolittle
Lieut. Charles W. Dunn
Frank Giordano
Cyrus D. Hakes
Harold T. Hughes, C Ph.M.
Frank L. Hunt
Lieut. Oscar J. Neundorfer
Harry Rosenfeld
Maurice Stein

1912

Harry B. Abell
Lieut. Eugene Calvelli
William G. Crockett
Robert R. Gerstner
Pasquale Guerrieri
Antonio O. Mattia
Serg. William F. Miller
Maximilian Nemser
Elias V. Pelletieri
Anthony Pepino
Eugene Rossi
Lieut. Robert Schleussner

1913

Corp. Roy W. Ball
Lieut. Morris S. Bender
Lieut. Alfred F. Calvelli
Lieut. Russell K. Chrisman
Morris Dimicelli
Edsell M. Drury
William Dyroff
Jerome E. Ettinger
Harry Flaxman
Benjamin A. Hayes
Clarence G. Hoffman
Edward Mahoney
Anton J. Martinek
Harlan H. Prince
Louis D. Short
Andrew O. Sorgi
Charles J. Watters

1914

Theodore B. Augsbury
Lieut. Harold T. Brotherton
Lewis N. Brown
Francis A. Callahan
Edward M. Cole
Edward Cragg, Ph.M.
Brooke J. Davis, C.Ph.M.
Thomas F. Fletcher
Edward A. Gurry
Harry Hammer
Nicholas M. Jacobson
Daniel W. Odell
Irving Richmond
Daniel M. Toomey
Charles M. Storm

1915

Arthur W. Besser
Serg. Leslie L. Blake
Joseph Cappetta
Antonio S. Carabillo
Bernard J. Dunn
George J. Ettenberg
William Greenberg
Harry Hershenstein
Joseph B. Kaufman
Frederick Lynch
Thomas McGranaghan
Benjamin M. Meltzer
Gabriel Petrella
Charles J. Somers
George D. Virden
Ralph L. Wheelock
Louis W. Zucker

1916

George V. Aronstamm
Harold S. Ball
Leo Brunswig
Joseph Cairoli
James H. Cummings
George Harold Dowsey
Jacob Fritz
Louis Fryer
Henry B. Heller
Salvatore Insigna
Serg. Rufus L. McQuillan
Joseph Markowitz
Joseph Maslon
Charles O'Hagan
Joseph F. Paulonis
Joseph C. Prote, Jr.

1917.

Serg. Wilmer O. Bacon
Leo Robert Brown
Lieut. Arthur C. Burnett
Pasquale Cagnina
Raymond F. Clemens
Renato Corti
Thomas P. Coyle
Lieut. Roland B. Genung

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*Killed in action (Mesopotamia)

David L. Gitlow
Attilio Graziani
Marshall V. Hawkins
Louis D. Horowitz
Milton Jacobius
Louis Jacobs
David E. Kadushin
Earle T. Keenan
Kenneth S. Kirkland
Frank N. Lehman
Roy A. Lehman
Benjamin W. Levine
Ezra Lipschitz
Joseph Livoti
C. Graham McCloskey
Wilberforce H. McEvoy
Aaron Mazeloff
Henry E. Miller
Maxim D. Miller
Harold A. Petty
Serg. John Renneman
Elting W. Roosa
Nicholas Rosa
S. Rosenfeld
John Savarese
Louis C. Schmidt
Aaron Trompeter

1918

Carl Brezovsky
Vincent Capobianco
Anthony T. Coccola
Vivian K. Commons
Frank V. Damtoft
Albert M. Finnegan
Thomas V. Gammarano
Elwin B. Gilbert
Edwin D. Hans
William J. Macsata
Raymond P. Madden
Harry Messing
Nathan Miller
Ralph D. Moyer
Peter Palumbo
Harold H. Parry
Harold S. Patterson
Jacob Pecharsky
Chalcedony Pensovecchio
Serg. Philip B. Roberts
Lieut. Benjamin Rosenberg
Edward Staloff
Serg. Caldwell Sweet, Jr.
Edgar M. Wilson

1919

Albert Dougherty
Jasper J. Elliott
Isaac Gershenson
Joseph Inglese
Milton Lehrman
Harry Levidow
Jacob Levinbuck
Victor Levy
Robert Lieberman
David Manashaw
Alfred M. Mainella
Stephen Mazza
Rexford Potts
Martin Ricklin
David Rosenman
Morris Sadofsky
Hilary Seligman
George W. Tolbin
Joseph Triner, Jr.

GRADUATES IN PHARMACY, MAY 16, 1918

Acampora, Pasquale .... 76 Ward Avenue, Mamaroneck, N. Y.
Ackerman, Milton .... 1417 Prospect Avenue, New York, N. Y.
Ahrens, George F. .... 200 N. Main Street, Liberty, N. Y.
Ajello, Anthony L. .... 109 Carroll Street, Brooklyn, N. Y.
Anderson, Charles E. .... Brewster, N. Y.
Aquaro, Philip .... 83 Sullivan Street, New York, N. Y.
Argueso, Josefina .... 465 West End Avenue, New York, N. Y.
Armentano, Anthony .... 321 E. 109th Street, New York, N. Y.
Arnold, Henry C. F. .... Quogue, N. Y.
Berger, David .... 326 E. 81st Street, New York, N. Y.
Brand, Edward J. .... 158 Main Street, White Plains, N. Y.
Breitbart, Jacob .... 218 Stanton Street, New York, N. Y.
Buss, Julius .... 363 Bushwick Avenue, Brooklyn, N. Y.
Celano, Joseph V. .... 315 Belmont Street, New York, N. Y.
Chernin, Isidor .... 1526 Washington Avenue, New York, N. Y.
Clark, Harry G. .... Walton, N. Y.
Concialdi, Joseph G. .... Rockaway, N. J.
Cooper, Jacob .... 102 E. 111th Street, New York, N. Y.
Damtoft, Frank V. .... 98 Beechwood Avenue, Bridgeport, Conn.
Dorris, Jacob .... 518 E. 149th Street, New York, N. Y.
Efros, Ida .... 146 N. Broadway, Baltimore, Md.

Egerman, Miss Lillian .... 164 So. Broadway, Yonkers, N. Y.
Engleman, Charles .... 475 Forest Avenue, New York, N. Y.
Feldman, David .... 249 Broome Street, New York, N. Y.
Felicetti, Marius E. V. .... 340 E. 116th Street, New York, N. Y.
Felitti, Adele .... 405 E. 114th Street, New York, N. Y.
Ferguson, Ralph Nevada .... 822 Emery Street, Fulton, N. Y.
Finkel, Samuel .... 50 W. 129th Street, New York, N. Y.
Finkelstein, Victor .... 1758 Walker Avenue, New York, N. Y.
Fisch, Hyman .... 152 Norfolk Street, New York, N. Y.
Fleischer, William .... 800 E. 168th Street, New York, N. Y.
Frankel, Benjamin .... 221 W. 141st Street, New York, N. Y.
Franklin, Louis .... 223 Monroe Street, New York, N. Y.
Fried, Julius H. .... 1189 Second Avenue, New York, N. Y.
Friscia, Anthony .... 8124 17th Avenue, Brooklyn, N. Y.
Gerken, Harold A. .... 1711 Popham Avenue, New York, N. Y.
Ginsberg, William B. .... 195 E. 7th Street, New York, N. Y.
Glass, Lewis D. .... 1526 Webster Avenue, New York, N. Y.
Goldberg, Israel L. .... 1712 Pitkin Avenue, Brooklyn, N. Y.
Greenfeld, Louis .... 175 Orchard Street, New York, N. Y.
Haas, Ludwig .... 120 Second Avenue, New York, N. Y.
Halpern, Benjamin .... 1032 Second Avenue, New York, N. Y.
Hans, Edwin D. .... 100 W. 105th Street, New York, N. Y.
Heller, Morris .... 57 Pitt Street, New York, N. Y.
Henig, Israel S. .... 284 W. Kenney Street, Newark, N. J.
Horowitz, Benjamin .... 664 E. 160th Street, New York, N. Y.
Hyman, Louis R. .... Port Jefferson, N. Y.
Jacobson, Andrew R. ....103 Ashburton Avenue, Yonkers, N. Y.
Jacoff, Samuel .... 312 E. 33rd Street, New York, N. Y.
Katsman, Joseph .... 13 Rutgers Street, New York, N. Y.
Kimmel, Everett R. .... 1477 Avenue A, New York, N. Y.
Klauber, Adolph E. .... 74 Pennsylvania Avenue, Rosebank, N. Y.
Kogan, Samuel .... 1496 Vyse Avenue, New York, N. Y.
Krepela, Rudolph .... 31 Woodside Avenue, Elmhurst, N. Y.
Lederman, Isidore .... 543 Claremont Parkway, New York, N. Y.
Lehrman, Philip .... 296 Brook Avenue, New York, N. Y.
Leon, Alberto .... 138 W. 66th Street, New York, N. Y.
Leventhal, Reuben .... 101 W. 126th Street, New York, N. Y.
Levin, Abraham .... 189 Rockaway Road, Jamaica, N. Y.
Levy, Aaron .... 73 W. 88th Street, New York, N. Y.
Lipsett, Nathan.......... 830 Hewitt Place, New York, N. Y.
Lisberger, Harry .... 4024 Fifth Avenue, Brooklyn, N. Y.
MacAdams, Harold .... Metuchen, N. J.
Madden, Raymond P. .... 6 Marshall Street, Saranac Lake, N. Y.
Maibauer, Robert R. .... Linoleumville, N. Y.
Melfi, Louis J. .... 426 E. 115th Street, New York, N. Y.
Miller, Nathan .... 598 E. 140th Street, New York, N. Y.
Mittleman, Max .... 647 Cauldwell Avenue, New York, N. Y.
Morrell, Clifford L. .... Keyport, N. J.
Newmark, Frances L. .... Centerville Station, N. Y.
Niemetz, Morris .... 2441 Seventh Avenue, New York, N. Y.
Obrentz, Morris J. .... 1485 So. Boulevard, New York, N. Y.
Paglia, Amerigo C. .... 133 Waverly Place, New York, N. Y.
Parisi, Dorothy .... 201 Floyd Street, Brooklyn, N. Y.
Pensovecchio, Philip .... 319 E. 29th Street, New York, N. Y.

Peruta, Frank D. .... 185 Slater Street, Paterson, N. J.
Raimondi, Nicholas .... 523 E. 13th Street, New York, N. Y.
Raskin, Louis .... 1608 Madison Avenue, New York, N. Y.
Reiter, Pauline .... 372 E. 8th Street, New York, N. Y.
Renner, J. Arthur .... 534 W. 152nd Street, New York, N. Y.
Renzulli, Aurelio V. .... 337 4th Street, Jersey City, N. J.
Richardson, Gerald A. .... 152 Virginia Avenue, Jersey City, N. J.
Richless, Charles .... 3 W. 101st Street, New York, N. Y.
Richter, Edwin A. .... Fort Lee, N. J.
Rosen, Max .... 930 E. 180th Street, New York, N. Y.
Rosenberger, Charles .... 1506 Hoe Avenue, New York, N. Y.
Ruby, Francis, Jr. .... 231 E. 58th Street, New York, N. Y.
Sackenoff, Frederick L. .... 868 Pleasant Street, Fall River, Mass.
Saiman, Adolph .... 239 Broome Street, New York, N. Y.
Schmidt, Herbert H. .... 612 Hudson Street, Hoboken, N. J.
Schore, Louis .... 226 E. 13th Street, New York, N. Y.
Schultz, Leo .... 234 E. 98th Street, New York, N. Y.
Schumann, George A. .... 337 Washington Street, Jamaica, N. Y.
Sedlineck, John A. .... 162 N. 4th Street, Paterson, N. J.
Seloff, Irving L. .... 86 E. 4th Street, New York, N. Y.
Sessarsky, David M. .... 711 Burnside Avenue, Burnside, Conn.
Sharfin, Abraham .... 571 Bronx River Road, Yonkers, N. Y.
Shavelson, Abraham N. .... 2508 Tilden Avenue, Brooklyn, N. Y.
Sher, David S. .... 1344 Park Avenue, New York, N. Y.
Silverman, George M. .... 704 Georgia Avenue, Brooklyn, N. Y.
Sirullo, William V. .... Southington, Conn.
Smalls, Arthur J. .... 94 Hamilton Place, New York, N. Y.
Spivak, Fred. .... 219 Madison Avenue, Flushing, N. Y.
Spoltore, John D. .... 115 E. 115th Street, New York, N. Y.
Stevens, Alexander .... 468 12th Street, Brooklyn, N. Y.
Sugarman, Jacob .... 233 E. 77th Street, New York, N. Y.
Tanenzapf, Isidore .... 2165 Brook Avenue, New York, N. Y.
Temliak, Selma .... 50 E. 103rd Street, New York, N. Y.
Tischelman, Nathan .... 9 Pitt Street, New York, N. Y.
Tishber, Philip .... 444 Grand Street, New York, N. Y.
Tolkoff, Jack .... 15 E. 107th Street, New York, N. Y.
Tomashoff, Simon .... 8 Rutgers Street, New York, N. Y.
Tragerman, Abraham .... 456 E. 175th Street, New York, N.Y.
Tunick, Jacob Boris .... 112 E. 10th Street, New York, N. Y.
Viscardi, Joseph J. .... 154 W. 63rd Street, New York, N. Y.
Volpert, Warren .... Newman, N. Y.
Wainger, Edward .... 11 E. 118th Street, New York, N. Y.
Wohl, Max Isidore .... 164 Stanton Street, New York, N. Y.
Wolfson, Max .... 579 Fifth Avenue, Brooklyn, N. Y.
Zaccardo, Dominic A. .... 641 Third Avenue, New York, N. Y.

William A. Hoburg, Jr., '93, has again become a "Jerseyite." He now represents Sharp & Dohme in Northern New Jersey and has moved to 884 South 17th street, Newark.

Leon M. Monell, Ph.C. '11, and Ch.E. '17, was married on June 1st to Miss Grace Kercher. We believe the happy couple will make their home in Rahway where the bridegroom is in the employ of Merck & Co.

SECOND YEAR HONOR STUDENTS

		Points	Per Cent.
1.	Selma Temliak	1122	93.5
2.	Philip Tishber	1098	91.5
3.	Nathan Miller	1090	90.83
4.	Anthony Armentano	1067	88.91
5.	Henry C. F. Arnold	1063	88.58
6.	Aurelio V. Renzulli	1061	88.41
7.	Nathan Tischelman	1049	87.41
8.	Rudolph Krepela	1047	87.25
9.	Edward Wainger	1043	86.91
10.	Louis Franklin	1041	86.75
11.	Jacob Sugarman	1039	86.58
12.	William B. Ginsberg	1038	86.5
13.	Louis Raskin	1037	88.41
14.	George A. Schumann	1027	85.58
15.	Isidore Tanenzapf	1027	85.58
16.	Pauline A. Reiter	1025	85.41

PRIZE AWARDS IN 1918

Alumni Association Second Year Prizes

Gold Medal	Miss Selma Temliak
Silver Medal	Philip Tishber
Bronze Medal	Nathan Miller

Trustees' Special Prizes

Pharmacy	George A. Schumann
Chemistry	Jacob Sugarman
Materia Medica	Pauline A. Reiter

Dohme Prize

Philip Tishber

Squibb Prize

Miss Selma Temliak

Italian Pharmaceutical Association Prize

Miss Selma Temliak

Lillian Leiterman Prize

Miss Selma Temliak

Joseph Weinstein Prize

Anthony Armentano

Lascoff Prizes

Anthony Armentano
Henry C. F. Arnold
Aurelio V. Renzulli
Nathan Tischelman

FROM THE LIBRARY

ADELAIDE RUDOLPH
Assistant Librarian

Recently Published Books Added During the Past Year

Abney. Researches in colour vision..1913
Allen. Commercial organic analysis. Ed.4. v.9..........................c1917
American medical association. New and unofficial remedies..............1917
Arneill. Clinical diagnosis and urinalysis..............................c1914
Bliss and Olive. Textbook of physics and chemistry for nurses. (Gift)..c1918
Comstock and Troland. Nature of matter and electricity.................1917
Crehore. Mystery of matter and energy..................................1917
Cuyás. Appleton's new Spanish-English dictionary.......................1917
Hiss and Zinsser. Textbook of bacteriology.............................1917
Kraemer. Scientific and applied pharmacognosy..........................c1915
Martin. Industrial and manufacturing chemistry. 2v.....................1917
May. Chemistry of synthetic drugs......................................1911
Ostwald. Handbook of colloid chemistry..................................c1915
Periplus of the Erythraean Sea; tr. and ed. by Schoff. (Gift)..........1912
Plattsburger. The. (Gift of a C. of P. student in the Service)..........1917
Race. Examination of milk..1918
Reference book of the medical sciences. v.8............................1917
Remington. Practice of pharmacy. Ed.6. 2v...............................c1917
Richter. Organic chemistry; tr. by Spielmann. v.1......................1916
Ruddiman. Pharmacy theoretical and practical...........................1917
Sadtler. Industrial organic chemistry. Ed.4............................1912
Scott. Standard methods of chemical analysis...........................1917
Small. Flora of the southeastern United States. Ed.2...................1913
Smith. General chemistry for colleges. Ed.2............................1917
Stillman. Engineering chemistry. Ed.5..................................1916
Street. Composition of certain patent and proprietary medicines........1917
U. S. Navy Dept. Handy book for the hospital corps. (Gift).............1917
Wood, F. C. Chemical and microscopical diagnosis. Ed.3.................1917
Wood, G. B. Dispensatory of the U. S. A.; ed. by Remington and others. Ed.20. ....c1918
Wootton. Chronicles of pharmacy. 2v....................................1910

Through the kindness of Mr. Charles S. Diamant, 819 East 163rd St., the Library has come into possession of a 4th edition of the U. S. Dispensatory. This reduces our "wanted" list to editions 2, 3, 6, 9, 10, and 17.

The photographic copy of the manuscript, described by Mr. Mayo on page 24 of the May number of the American Druggist, has been presented by him to the Library, and is now framed and on exhibition.

ABSTRACTS

Conducted by Prof. George C. Diekman.

Alcohol Determination

The addition of sodium fluoride to solutions containing not less than 1 to 2% of alcohol, will result in the "salting out" of the latter, according to C. J. Haines and J. W. Marden, in *J. Ind. Eng. Chem.*, 1917, 9, 1126-7. If the alcoholic content of the liquid exceeds 50%, 5 mils of the liquid, diluted to 10 mils with water, are employed, lesser strengths permit the use of 10 mils of the original liquid. The liquid is placed in a centrifugal tube, graduated in 0,01 mil, and sufficient sodium or potassium fluoride added, to cause the volume of the liquid to inrease to 13 mils. In order to render the alcoholic layer more visible, a very small amount of malachite green is added. The tube is then closed, shaken vigorously for from 2 to 3 minutes, allowed to cool, and the contents then centrifuged. An addition of 0,15 mil must be made to the reading in order to compensate for incomplete separation and traces of alcohol which will continue to adhere to the side of the tube. The temperature at which the operation is carried out should be as near to 15.6° C. as possible, a correction of 0,001 mil must be made for each degree by which the temperature deviates from this temperature. The authors state that the method is applicable to tinctures, spirits, wines, beer, cider, etc., and that it yields results within 0,40% of those obtained by the distillation and specific gravity methods. The presence of iodine, as in case of the tincture, seems to exert little or no effect upon the volume of alcohol separated.

Tannic and Gallic Acids

M. Mito, in *J. Chem. Ind. Tokyo,* 1917, 20, gives an account of the preparation of tannic and gallic acids and pyrogallol. The following is taken from his report: Japanese gall nuts were extracted with water in four successive treatments, at 20° to 30° C., and the residue expressed. In such manner a 13% solution of tannic acid was obtained, and this yielded 82% of the theoretical quantity. Tannic acid was obtained by concentrating the solution, at proper temperature, to 20% strength, extracting with half its volume of ether, and vaporizing the ether extract thus obtained. A yield of 75% of the tannin in the aqueous extract was obtained. The residual solution, after extracting the tannin was treated for removal of gallic acid, by first concentrating to 20% strength, and then treating with sulphuric acid, 15% to 20% by volume, (specific gravity 1.84). The precipitated black mass was dissolved in water, and after being decolorized by treatment with animal charcoal, was recrystallized. Pyrogallol was produced by heating crude gallic acid, with about 3 times its own volume of water, in an autoclave at 210° C.

Tannin Content of Trees

H. B. Benson and F. M. Jones, in *J. Ind. Eng. Chem.*, 1917, give an interesting account of investigations made with a view of determining the tannin content of certain Pacific coast trees. The following figures are given, as representative of the tannin content of the trees examined:

Western Larch (Larix occidentalis), wood 6.70%, bark 10.6%; Western Yellow Pine (Pinus ponderosa), wood 8.90%, bark 10.90%; Western Hemlock (Isuga heterophilla), wood 1.10%, bark 10.93%; Dogwood (Cornus nuttalli), wood 1.30%, bark 1.70%; Cottonwood (Populis trochocarpa), wood 1.80%, bark 4.70%; Alder (Alnus Oregona), wood 0.70%, bark 3.30%. The Western Larch tannin is found to impart a light-red color to the hide, which makes it commercially more valuable. The wood of this tree, when hydrolized, produces a high yield of alcohol, and thus makes it more valuable for chemical utilization, than for timber. In some instances the timber value of the tree is so high, that it is not generally available as a source for tannin. In such event it is suggested that the waste of the saw mills be at least so utilized.

Antiseptic Solution

L. Menciere, in *Comptes rend.*, 1917, 165, reports on the use of an antiseptic solution, among whose constituents are guaiacol and benzoic acid, together with other aromatic compounds, such as eucalyptol. These solutions have been used very extensively in the hospitals of France with great success, for the treatment of wounds. They are said to possess antiseptic properties to a high degree, and are not toxic toward cellular protoplasm, and have no solvent action on animal tissue, as have the hypochlorite solutions. Experiments conducted with a view of ascertaining the preservative qualities of these solutions, established that pieces of meat, immersed in a solution containing in each liter 5 grammes of guaiacol, 1 gramme of benzoic acid, and 4 grammes of alcohol, showed no signs of decomposition after 15 months. Meat so treated, when subsequently exposed to the action of air, seemed to be immune from putrefaction. Much stronger solutions, when injected intravenously in rabbits, showed no evil results.

Lubricating Aeroplane Motors

C. Frabot, in *Ann. Chim. Analyt.*, 1918, 23, 7-11, gives the results of further investigations of the value of castor oil as a lubricating agent for aeroplane motors. He shows that the detection of foreign oils in castor oil, based upon the solubility of the latter oil in petroleum benzin, and the solubility of the petroleum benzin in castor oil, is entirely dependent upon the character of the petroleum benzin employed. When castor oil is tested for impurities in the customary manner (for foreign oils), the kind of petroleum benzin used is of prime importance. Thus it is found that fractions of the petroleum benzin dissolve varying quantities of castor oil, a fraction, b. p. 33.2° C. dissolved 6.51 grammes of castor oil, and fraction boiling at 76° C. dissolved 13 grammes of the oil. The solubility of the castor oil increases with the boiling point of the petroleum benzin. The increased volume of the oil, due to dissolved petroleum benzin, is subject to less variation, and depends less upon the kind of benzin used. The suggestion is made, that in order to obtain the very best results, the fraction of petroleum benzin, boiling between 35° and 65° C. only be used.

INFORMATION - BUREAU -

Conducted by Prof. H. V. Arny.

GENERAL INFORMATION.

1. Telephone inquiries will be answered cheerfully without charge. Residents of Greater New York or vicinity wishing to inquire about some pharmaceutical problem will ring up the Information Bureau, Columbus 117, and will receive information immediately, if same is accessible.

2. Non-residents will have their problems answered in the next issue of the C. U. C. P. ALUMNI JOURNAL without cost, if they send their inquiries by mail.

3. Those not wishing to wait for their information until the next issue of the JOURNAL, may have their inquiries *answered by mail by enclosing a self-addressed stamped envelope.*

4. Problems requiring extended research will be handled for a fee as moderate as consistent with high grade service.

5. Translations of articles from foreign languages, either in full or in abstract, as well as transcripts of papers appearing in English or American pharmaceutical, chemical or botanical periodicals will be prepared for those desiring to pay for such service.

6. As in the past, all visitors to the library, desiring to do their own research work, will be given courteous attention.

H. V. ARNY, Librarian.
ADELAIDE RUDOLPH, Bibliography.
HUGO H. SCHAEFER, Queries.

ANSWERS TO QUERIES.

Elixir of Triple Phosphates.—D. T. G., New York.—This is a name frequently applied to elixir of the phosphates of iron quinine and strychnine. Curiously the synonym is not given in the recent dispensatories or similar pharmaceutical works. The earliest reference we find to the name is in a paper by E. L. Patch (*Proc. A. Ph. A.*, 36, 1891, 135) who calls it "elixir of three phosphates."

Ethyl Hydrocupreine. B. F. F. and J. M. T., New York, have inquired about this new remedy, the last named querist stating he had just received a prescription for eye drops calling "ethyl hydrocurpine." The chemical in question is marketed under the trade name "optochim" and has been recommended in pneumonia, in scarlet fever and also in opthalmic therapy. It is claimed to have disastrous effects upon the eye, when administered internally. For further details, see *Year Book of the American Pharmaceutical Association,* 1913, 127; 1914, 135; and 1916, 377.

Blanc de Berlene.—R. I., New York.—We presume that the recipe you cite really called for *blanc de baleine,* which is the French name for spermaceti.

Solubility of Salicylic Acid.—T. K. E., New York, in compounding a prescription calling for salicylic acid, sodium phosphate and ferric pyrophosphate, U. S. P. VIII, noted the ease with which the sparingly soluble organic acid dissolved in an aqueous solution of sodium phosphate and desires to know why this is so. In the first place, this property of dissolving certain compounds that are only sparingly soluble in water is possessed by a number of salts such as citrates, tartrates and phosphates. This explains the preparation of the scale salts of iron, for it is well known that the definite chemicals ferric phosphate and ferric pyrophosphate are insoluble in water but when ferric citrate is made to interact with sodium phosphate or sodium pyrophosphate, the medicinal water-soluble scale salts are obtained. In the case of salicylic acid, it is to be borne in mind that official sodium phosphate is alkaline in reaction and this is likely to explain why it causes the acid to dissolve.

The chemical composition of the iron compounds are not so easy to explain, the only explanation that we have found is that of Stevens, (*Proc. A. Ph. A.*, 55, 1907, 155) who states that ferric chloride combines with potassium citrate in the proportion of two molecules of the ferric salt with three molecules of the potassium compound, giving six molecules of potassium chloride and a double salt $K_3C_6H_5O_7 + 2\,Fe\,C_6H_5O_7$.

Rotation of Oil of Lemon.—H. D. A., New York, has a sample of oil of lemon which has the optical rotation 57° 50′ at 15° C. He wishes to know how this agrees with the requirements of U. S. P. IX.

The Pharmacopoeia states that oil of lemon should have a rotation of from 57° to 64° at 25° C. and our problem therefore is to transcribe our querist's figures given above from 15° C. to 25° C. In Gildemeister, Hoffman and Kremers' "*The Volatile Oils,*" it is stated that for converting the rotation of oil of lemon from 15° C. to 20° C., one must add 9′ for each degree centigrade and from 20° C. to 25° C., one must add 8.2′ for each degree centigrade. This done in the present case, we find that the calculation is 51° 50′ + 45′ + 41′ or 53° 16′, which is lower than the minimum requirement of the Pharmacopoeia.

Druggist's Sterilizer.—H. H. B., New York, desires information as to a cheap form of sterilizer for rendering citrate of magnesia bottles aseptic. The New York Department of Health has gotten up a home-made sterilizer for retail druggists, while, at the 1917 meeting of the New York State Pharmaceutical Association, J. Leon Lascoff recommended the "Pressure Cooker" which is made in Denver and which sells for $15.00. For details see the *Proceedings of the Association* for 1917, page 221.

Legal Queries.—During the month, we have answered a number of queries relating to pharmacy laws, local, state, and national, emphasizing each time that the information given was merely the personal opinion of a layman. For this reason we do not print such answers, since in serious legal matters a lawyer should be consulted.

Syrup of Citroiodide of Iron.—P. L. B., New York.—The recipe for this preparation given in the third edition of the National Formulary is as follows:

Iodine	60 grammes
Iron wire	28 grammes
Potassium citrate	85 grammes
Sugar	650 grammes
Distilled water, enough to make	1000 mils

Mix the iron with 250 mils of distilled water in a flask, add 40 grammes of iodine, apply gentle heat and then set aside until the solution has acquired a green color. Heat the contents of the flask to boiling, filter, wash the filter paper with 32 mils of water, add to the filtrate 20 grammes of iodine and when this is dissolved add the potassium citrate previously dissolved in 200 mils of water. Agitate the solution until it is of a green color, then pour it upon the sugar contained in a bottle, shake until the sugar is dissolved, and then add enough water to make 1000 mils.

Iron Content of Solution of Albuminate of Iron.—B. L. K., New York.—According to the new (20th) edition of the *United States Dispensatory,* solution of albuminate of iron, N. F. contains about 2/5 grain of metallic iron to the fluiddrachm.

Names of Manufacturers.—We gladly furnish our querists with information concerning the manufacturers of goods handled by the drug trade, but for obvious reasons, such answers are not published in this department.

Laundry Ink.—D. S., New York.—Perhaps the following recipe taken from *Henley's Formulas* is what you want.

Laundry Ink

Aniline oil	85 parts
Potassium chlorate	5 parts
Water	44 parts
Hydrochloric acid (Sp. gr. 1.124)	68 parts
Copper chloride	6 parts

Mix the aniline oil and the potassium chlorate with 26 parts of water and heat in a capacious dish on a water bath from 175 to 190° Fahrenheit until the chlorate is dissolved. Then add half of the hydrochloric acid and heat until the mixture is dark. Dissolve the copper chloride in the rest of the water, add to the solution the rest of the hydrochloric acid, add this to the mixture on the water bath and heat until the mixture has a red-violet color. Pour the mixture into a glass stoppered bottle, let stand until no more precipitate forms, then decant off the clear layer of liquid and bottle it for use.

If this does not fill your need, you may obtain further information from other books in our library.

Sixth Gramme-molecule Solution.—T. R. B., New York, has received a prescription calling for 12 ounces of 1/6 gram-mol solution of calcium chloride and wants to know how to dispense it. We presume the doctor had in mind an isotonic solution of calcium chloride and prescribed it in terms of physical chemistry. We have been unable to find anything on the subject in our library but venture the following calculations by way of suggestion. The molecular weight of calcium chloride,

$CaCl_2 + 2H_2O$ is 147.02

A gramme-molecule solution of this would contain

147.02 grammes $CaCl_2 \ 2H_2O$ in 1000 mils

A sixth gramme-molecule solution would contain

$147.02 \div 6 = 24.503$ grammes $CaCl_2 \ 2H_2O$ in 1000 mils

1000 mils represents 33 fluid ounces.

12 fluid ounces are approximately 360 mils.

Hence in 12 fluid ounces (360 mils) we will need

$$\frac{360}{1000} \times 24.503 \text{ or } 8.821 \text{ grammes } CaCl_2 \ 2H_2O$$

If any of our readers have better information on the subject, we hope they will share it with us.

Unguentum Plumbi et Gallae.—B. J. G., New York.—We have been unable to find a recipe for this preparation in the score or more of books that we examined. The nearest we can get to it is a recipe for *unguentum plumbi tannici* which is prepared according to Hager's "*Handbuch*" 1913, volume I, page 139, as follows:

Recipe of First German Pharmacopoeia:

Oak bark	50 grammes
Distilled water	250 grammes
Solution of lead subacetate	25 grammes
Glycerin ointment	16 grammes

Make a decoction of oak bark with the water and mix strained and cooled decoction, with the solution of lead subacetate. The resulting precipitate is collected on a filter, is expressed until it weighs 25 grammes, after which it is mixed with the glycerin ointment.

Recipe of the Third German Pharmacopoeia:

One gramme of tannic acid is triturated with 2 grammes of solution of lead subacetate and is then mixed with 17 grammes of lard.

The *glycerin ointment* used in the first recipe is a glycerite of starch made by triturating 2 parts of wheat starch with one part of distilled water and then with 10 parts of glycerin, after which the mixture is heated on a steam bath until a jelly is formed.

Sweet Basil.—Z. O. M., New York.—This is a name for the aromatic herb, Ocimum Basilicum, a plant of the Natural Order Labiatae.

Pharmacology of Aloes.—D. P. H., New York, desires to know what difference, if any, exists in the medical properties of the various types of aloes. Reference to the books in our library including works on pharmacology failed to give any information beyond the fact that different varieties of aloes contain distinctly different amounts of aloin and hence some have stronger purgative action than others. We are informed, however, that to some persons having an idiosyncrasy in that direction the action of Barbadoes and Curacao Aloes are so distinctly different that the cause cannot be ascribed merely to variation in aloin content. Perhaps some of our readers may be able to throw more light on this interesting subject.

THE ALUMNI ASSOCIATION OF THE COLLEGE OF PHARMACY OF THE CITY OF NEW YORK

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MINUTES OF THE MEETING OF THE ALUMNI ASSOCIATION HELD WEDNESDAY EVENING, MAY 15, 1918

The regular stated meeting of the Alumni Association of the College of Pharmacy of the City of New York was held in the Alumni Room, Wednesday, May 15th, 1918.

The meeting was called to order by President Weil at 8 o'clock.

Members present were: F. Wichelns, '74; A. Henning, '76; Geo. C. Diekman, '88; N. S. Kirk, '94; J. Hostmann, '96; Wm. C. Stubenrauch, '99; C. P. Wimmer, '02; Wm A. Holley, '05; J. M. Williams, '05; M. H. Weil, '10; I. Schwartz, '12; H. H. Schaefer, '12; J. W. Brown, '14; S. Feigin, '15; J. W. Rampulla, '16; J. Varga, '17; Wm. Notar-angelo, '17.

On motion the reading of the minutes of the preceding meeting was dispensed with except the report of the nominating Committee.

On motion said report was approved as read.

Treasurer Diekman reported that the finances of the Association were in good condition. All bills are paid and a balance left in the treasury.

He also reported that sixty-five members of the graduating class of 1918 have qualified for membership in the Association.

Mr. Adolph Henning rendered the following report. That the medals had been purchased and properly inscribed. Prof. H. V. Arny had donated the Second First Year Prize; Prof. J. Hostmann had donated the Third First Year Prize; Messrs. Snyder and Black inscribed the medals and Messrs. Haggerty Bros. the glass plate.

The motion that the report be accepted and that the thanks of the Association be extended to Mr. Henning for the excellent service rendered, Dr. H. V. Arny for the donation of his "Principles of Pharmacy," Prof. Hostmann for the donation of Sadtler and Coblentz Pharmaceutical Chemistry, Messrs. Snyder and Black and also Messrs. Haggerty Bros. & Co., was made, seconded and carried.

The nominating committee reported the following nominations:

For President	Curt P. Wimmer
" First Vice-Pres.	Nelson S. Kirk
" Second "	Fortunato O. Ghirardi
" Third "	Paul O. Bloom
" Secretary	Miss Fanchon Hart
" Treasurer	George C. Diekman
" Registrar	Jeannot Hostmann
Executive Board, term expires 1921:	Chas. W. Ballard Vito Calcagno John M. Williams

The Secretary on motion duly made, seconded and carried was ordered to cast one ballot for the entire ticket.

President Weil duly declared same elected.

Dr. Curt P. Wimmer made a short speech thanking the Association for the honor conferred upon him.

On motion made, seconded and carried the members of the graduating class of 1918 who have qualified were elected to membership.

Joseph Brown, '14, was elected to membership and Israel Schwartz, '12, to life-membership.

On motion the meeting was adjourned to meet June 12th, 1918.

(Signed) JOHN M. WILLIAMS, *Secretary, Pro Tem.*

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COLLEGE OF PHARMACY
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CITY OF NEW YORK

COLUMBIA UNIVERSITY

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The Max J. Breitenbach cash prize of two hundred dollars and the George J. Seabury scholarship provide tuition fees for the fourth year to the two students standing highest at the close of the third year.

The Trustees also award three cash prizes of one hundred dollars each, for special proficiency in chemistry, pharmacy and materia medica, to members of the second year class.

The Louis Dohme prize consists of one hundred dollars in cash for special proficiency in pharmacognosy.

The E. R. Squibb prize consists of one hundred dollars for special proficiency in analytical chemistry.

The Pace Prize consists of fifty dollars for highest proficiency in pharmaceutical accounting.

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C. U. C. P. Alumni Journal

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THE ALUMNI ASSOCIATION OF THE NEW YORK COLLEGE OF PHARMACY, COLUMBIA UNIVERSITY

JEANNOT HOSTMANN, Editor

Contributing Editors: H. H. RUSBY, — G. C. DIEKMAN, — H. V. ARNY

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EDITORIAL

ARE YOU LOYAL? PROVE IT

At the 48th annual session of The New Jersey Pharmaceutical Association a letter from the National Pharmaceutical Service Association was read. This letter asked for co-operation in impressing upon the members of Congress the need of the passage of the Edmonds Bill. The members of The N. J. P. A. realizing that the safeguarding of the life and health of the individual soldier is their especial duty responded as one man.

Resolutions urging upon the members of Congress from New Jersey the need of H. R. 5531 were adopted. One thousand petitions will be circulated and the members of the Association will endeavor to have these signed by parents of boys who have left everything dear to them behind so as to make this world a decent place to live in.

Are you loyal? Will *you* do your share? Of course *you* are! Of course *you* will. You have undoubtedly written to your Congressman. Urge upon everyone you meet to write to the members of Congress from the respective districts.

Impress upon them that "our boys" are entitled to the same kind of professional service that they received as civilians.

If this war is to be won—and it will be won—we must have a Pharmaceutical Corps. We will have it—we must have it—the welfare of our boys demands it. Be loyal! Do your share! Get behind H. R. 5531.

Alumni Night

The reception and entertainment tendered by the Alumni Association to the members of the first year class was held in the college building on the evening of May 15th.

After the rendering of the "Star Spangled Banner," Prof. Wimmer introduced Professor Diekman, who spoke as follows:—

Ladies and Gentlemen:—

It is both a pleasure and a privilege to be permitted to address you this evening. I will not take up much of your time with any lengthy discourse but will be as brief as the circumstances will permit, and then leave you to enjoy the rest of the excellent program which has been provided for your entertainment and that of the class. As you know, the Alumni Association each year, in order to show its interest and concern in the welfare of the undergraduate body, tenders to the members of what has been the First Year Class, and now will form the nucleus of the 1918-1919 Second Year Class, these so called "Junior Night Exercises."

I had the honor of addressing all the members of the Junior Class at least twice a week for thirty weeks and a few members of the class even oftener than that. I will therefore not say much to the members of this class, but will say things about them. I have as the result of the recent examination gathered quite a store of new and more or less valuable information and while conservation is a national order of things at this time, I feel that I ought to share at least a small amount of this information with you, but am prevented from doing this by lack of time. I would not have you believe, however, that the members of this class or the class as a whole were lacking in scholarship. What they individually and collectively have accomplished will be told you by others later on in the evening.

Classes are noted for and judged by other things, however, than scholarship and general behavior. There is that somewhat indefinite and intangible, yet very real and important factor, known as "class spirit." This usually makes itself manifest first about the time the class organization is effected, and a careful analysis of the situation at that time gives a fairly accurate forecast of what the class is going to accomplish in matters other than scholarship. I believe that I am well within the limits of the truth when I say that the class spirit developed by the class of 1919 ranked well with that of any class in the history of the College. The calibre of class members chosen to fill the various class offices was of the best type, and talk about running an election with printed ballots, arguments for suffrage, etc., why Tammany Hall is not to be considered in the same class.

The members of this class exhibited true patriotic spirit in the matter of subscribing for the government loans and the proceeds of their subscription was added to the so-called Student Loan Fund.

I would also at this time say a word to any employer of these young women and men, who may be in the audience, in regard to the matter of taking a personal interest in the employee and assisting her or him in the matter of studies and more especially in allowing sufficient time for studies. These young women and men will be the pharmacists of tomorrow and we shall need their help and cooperation for the benefit of Pharmacy. And may I not be permitted at this time to draw attention to the great necessity of harmony and organization within our ranks, for without this we can accomplish practically nothing; without these, the pharmacist will never be accorded the position and rank in the community to which he is justly entitled. An illustration of this is the effort, so far without tangible result, of obtaining rank for at least a number of pharmacists in the U. S. Army. I am fully convinced that if the 50,000 or more pharmacists of this country were properly organized and were of one mind, recognition would be accorded them.

I desire to sincerely congratulate those members of the Class of 1919 who have successfully passed all examinations and who will begin the last year of their work leading to the degree of Ph.G. very soon. I would likewise just as sincerely congratulate those members of the class who still have one or more conditions to make up for the determination they are showing and the efforts they are already beginning to make to remove these conditions in the Fall Examination. All of them will be the better fitted to continue and to bring their studies to a successful termination, because of this additional work. I am telling you this because I have interviewed many of these students and as I have before told you they possess the proper class spirit and a determination to succeed. I expect nothing less from them than that they will succeed.

And now I come to that part of my address in which I am going to tell you of something which makes me feel more proud of the membership of the Class of 1919, as a whole, and of the individual members to which it applies, than anything to which I have heretofore referred, and that is the fact that over forty members of the Class are now in Government service, either serving in the United States Army or Navy or one of their divisions. Over forty members of the class including its president have left their work in the classroom and laboratory, left behind them all ties of home, all ties of friendship, so that they might serve our country and so that you and I may continue to live in a peaceful and orderly manner. I HONOR THEM, I AM PROUD OF THEM. Each one of this number is represented by one of the many stars which collectively make up the figure which you will see upon the service flag of our College, which is now being displayed for the first time, and which is a gift of Mr. Max Breitenbach, an alumnus of the College, and a graduate of the Class of 1877, and whose interest in the affairs of the student body and the graduate body, is unfailing and untiring.

Our service flag as you will note shows the figure 175, thus telling to the world that, at least as far as we know, many of our boys are in service. Besides the men of the Class of 1919 in service, there are the men of the Class of 1918, who had they remained at their work and studies, would undoubtedly have been declared eligible to receive the degree of Graduate in Pharmacy. And then there are the others, members of previous classes, and members of the Faculty, who also have added their quota to make up the number 175. Two members of the Faculty felt that they should respond to the call of their country and left their posts to render service in other directions. One of these, Brooke J. Davis, Ph.G., Instructor in the Department of Analytical Chemistry, chose service in the United States Navy, and is now stationed at the Virgin Islands, serving in the capacity of Chief Pharmacist Mate. The other, Lewis Nathan Brown, Phar.D., chose service with the United States Army and is now performing service at Camp Merritt, New Jersey, with the sanitary division.

It is with sadness, mingled with pride, that I call attention to the single gold star in the red field of our flag. It is the only way we now have of showing the world that one of our number is no more, that one of our number gave all that he possessed, so that others might be restored to health and useful activity, or might even live. This gold star is placed on the Service Flag in honor of Dr. Albert S. Cooke, Class of '98, and a veteran of the Spanish-American War, who, after returning from that campaign took up the study of medicine at our own College of Physicians and Surgeons and who graduated from that institution, receiving the degree of M.D. When the call for volunteers to serve with the American Ambulance Corps in Servia during the epidemic of typhus fever which ravaged that unfortunate country came, he at once offered his services and did most valuable and efficient work in the cause of humanity, and finally gave up what is most precious to perhaps all of us, life itself, so that others might be saved and spared.

Let us hope and pray that this will be the only instance where the supreme sacrifice is demanded. Let us hope and pray that as duty calls and our service stars increase in number, as I know they will, none of the others will be required to make the supreme sacrifice, but that all of them will be returned to their loved ones. whole in limb, sound in mind, to follow the profession which they have chosen, serving us in peace, as they served us in conflict and strife, not for profit, not for gain, but once more that others may live.

Miss Josephine Rinaldi, a singer of rare ability, then sang "Non e Ver" by Tito Mattei and as an encore "Sogno" by Talo Tofte.

With appropriate remarks President Monroe H. Weil presented to Edward Yanket the first prize, a Springer Torsion Prescription Balance; to Henry Rosenberg the second prize, a copy of Arny's "Principles of Pharmacy." Gershen Cohen and Jacob Simonet, being tied for third prize, each received a copy of Sadtler and Coblentz "Chemistry." After listening to the wit of Robert Wills, "The Irish Senator," the room was darkened and there appeared upon the screen "*some*" class pictures, the joint product of Miss Frances Newmark, '18, and H. Kimmel, '18, which said pictures took the audience by storm, as they very cleverly caricatured some of the habits and hobbies of students and teachers.

The singing of "You're in style when you're wearing the smile" and "A lump of sugar from Dixie" closed part one.

After Himmel's Orchestra had rendered a selection, Miss Edith E. Hubel, '19, rendered "Love, Love" and "The amorous gold fish" from "The Geisha," accompanied by Mr. A. Ponsa. Miss Hubel's beautiful voice was in splendid condition and she was rewarded with much well-merited applause.

Mr. Harry Hoch accompanied by Moe Krauss then sang "Hello Central, give me no man's land" and "When Alexander takes his rag-time band to France." Miss Edythe Kleinfield, '19, played "Salut au Pesth" in a manner that convinced her audience that she is a pianist of rare ability. Mr. Wills now told some more witty stories and was followed by Dr. Schaefer who read the following roll:

FIRST YEAR HONOR STUDENTS

		Points	%
1.	Edward Yanket	1199	92.23
2.	Henry Rosenberg	1192	91.69
3.	Gershen Cohen	1147	88.23
4.	Jacob Simonet	1147	88.23
5.	Barney M. Glinsky	1143	87.92
6.	Oldrick A. J. Suk	1131	87.00
7.	Meyer Greenberg	1125	86.53
8.	Elizabeth Kish	1121	86.23
9.	Louis Gussow	1114	85.69
10.	Herbert L. Ehret	1113	85.61
11.	William Ginsburg	1113	85.61
12.	Marcel Brucar	1107	85.15

The audience now joined in singing "America" and then the younger folks—and some of the older ones also—adjourned to the library and spent the balance of the evening in dancing.

NO COLD STORAGE GREETING FROM MISS MARY; HER DESK IS AT THE DOOR

Tempting Fate 'Neath The Grim Shadow Of Dupont Smokeless Powder Plant, Girl Druggist—A Blushing Jersey Rose—Smiles And Dances Her Way To Fame And Fortune—Proving That Sympathetic Methods Pay.

Less Stiffness, Less Ice, A Little More Heart And Social Radium—There's A Recipe You Cannot Beat, Whether It's Clothed In A Skirt Or An Old Pair Of Pants.

If a smile could be measured by dollars, Mary Meier would be rich as Croesus.

Ogden Armour says Charles M. Schwab of Bethlehem Steel has a million dollar laugh—he just laughs himself into your confidence until you start laughing yourself. Before you realize it, he has your hand on the pen and your signature to the order—you can't resist him.

If Charley Schwab's laugh is worth $1,000,000, Mary Meier's smile is easily worth $2,000,000, for Charley is 58 and Mary—Miss Mary—is not 28, with a pair of melting blue eyes, wondrous white teeth and a complexion kissed with the bloom of Jersey's hills. Many a woman with half these assets—half that smile—has cashed them in for $2,000,000, and the lucky man considered them a bargain—watch out for Mary.

Mary is a druggist—the youngest boss druggist in the state of New Jersey—a sweet slip of a girl, well dressed, well poised, intelligent, fond of dancing, pulsating with the joy of life, with the dew of the country on her clear cheeks undulled by powder and with her heart on her sleeve—shoot it if you dare.

Three years ago she graduated with honors from the Columbia University College of Pharmacy in New York and set her compass for hospital work, but changed her mind and went to work as a junior clerk for a druggist. A year of this and then back to the home nest in the hills of northern New Jersey at Butler for more study and some play.

Brother William is the physician of the Dupont smokeless powder works at Haskell, N. J. Emma Jenkins, until a short time ago, was the Dupont community nurse. In November Miss Jenkins and Miss Meier talked it over and decided to open a drug store in Haskell. The owner of the only drug store in Haskell had been drafted and had to go away, leaving his store in charge of a registered man—the women saw a chance. In three years—since the war began—Haskell has jumped from a population of 50 to 1,500 and is on the boom. The Duponts with their powder plant are pushing it to the front—every train brings in new workers.

So the partnership of Jenkins & Meier was formed and a store opened on the Greenwood Lake Turnpike 'neath the shadow of those tall steel Dupont smokestacks, with their ominous black clouds of smoke, belching forth night and day. Miss Jenkins continued her work as community nurse and was the silent partner; Miss Meier assumed charge of the store as the active registered member of the firm.

Just inside the door she placed a small neat oak roll top desk so that she might be near to greet you as you enter—there's no cold storage welcome from Mary. She's glad to see you and shows it. I tiptoed in there the other day and got infected before I advanced two feet. Over the top of that desk that smile threw out its warming rays and caught me head on—I felt I was in the house of friends instantly.

Since November, a good part of Haskell's population and the country thereabouts has been inoculated with the unctuous joy of that balmy smile. And as the cocktail followed the flag in the days of yore, so does business follow the smile at Haskell—prosperity has hung up its hat in the store of Jenkins & Meier.

On the opening day of the Jenkins & Meier store, every child in Haskell who could crawl, walk, run or paddle its way there afoot or in a perambulator was given a balloon FREE. And it's been opening day almost every day since for candy. A child enters to buy something for its mother and it's 10 to 1 that as it leaves, a wholesome sweet of some kind or sugared peanuts will be thrust into its hand with an admonition to be a good little boy or girl—there's the feminine touch for you. A mother comes in with her baby and that baby is smothered with attention as only a woman can smother it. Its little cheeks are patted, its chubby chin tickled and its little hands made to play "patty cake—patty cake" until it coos in gladness while mother looks proudly on and vows that Miss Mary is the sweetest druggist she ever met. One good turn deserves another.

At Christmas, the Jenkins & Meier store made a special display of toys. Miss Mary invited the children in to see them and showed them all the wonderful things the toys would do—they never had anybody else to do that before. There was no peace at home after that—the children just had to have those toys. Miss Mary made a clean up. To reach the home, first reach the heart of children—Miss Mary has that in her pocket to-day. "I love children," she says—there's the woman of it. You can't beat it.

Women come in and ask Mary for a cream face lotion that will give them a complexion like she has. She smiles and hands them out the best she has. Men ask her to pick out for them perfumes that will appeal to a woman. She smiles again and sells them a top notcher at full price—Mary never cuts and doesn't believe in cheap stuff. High wages are made by the Dupont workers and they want the best.

Some of them cannot speak English but that makes no difference—Miss Mary speaks to them in their own tongue—Italian, Polish, Swedish or anything else. In the short time she has been in Haskell she has picked up enough of the foreign lingo of the Dupont workers to be legal tender anywhere and make herself understood and to understand others.

The young folks come in with their cameras in trouble. Miss Mary shows them how to correctly focus them to get the best results and explains its mechanism to them, as few druggists are able to—Miss Mary is a camera sharp and knows. Then the smart Alex strols in and asks Miss Mary to pick out a good cigar for him or recommend him a good brand of cigarette to smoke. Mary reaches for the most expensive always—makes him eat crow or confess he's a cheap skate. Thus Miss Mary smiles away the day from 8 A. M. to 9 P. M., making friends and money for the firm of Jenkins & Meier. She doesn't mind 13 to 14 hours' work a day, but she draws the line on Sunday—that day is hers and the Jenkins & Meier store is closed.

For recreation Miss Mary can't go to lodge, like her fellow male druggists, but she goes to dances instead. Three times a week, after closing up, she hikes over to the dance given by the Dupont's for their employees at the Y. M. C. A. The Dupont's hire a special New York orchestra to provide Waldorf-Astoria music for these dances and everybody who is anybody in Haskell is there. Naturally Miss Mary and her smile come in for notice. There's introductions all around. Inevitably this helps business—when things are needed at the drug store what's more natural than to go to Miss Mary's for them—to Miss Mary who smiles so sweetly and dances so gracefully.

So the firm of Jenkins & Meier is very much on the map. Fortune, beguiled by that smile, is taking it for its own.

Reprinted from *Drug Topics.*

FROM THE LIBRARY

ADELAIDE RUDOLPH
Assistant Librarian

With the photographic copy of the manuscript, mentioned in the last issue of this JOURNAL, of a draft of a plan for a medical department in the Continental army, which refers to an Apothecary General, Mr. Mayo sent certain other pages that have not been framed for exhibition, but which may be consulted on request.

It seems, that Dr. William Shippen, Jr., of Philadelphia, who drafted this plan and laid it before Congress in March, 1777, was holding at that time the position of chief physician of the "Flying camp," which, in these days of aviation service, sounds strangely anticipatory. But, in fact, it was not so; for the two pages of manuscript that Mr. Mayo sent us, describing the proposed "Flying Hospital," show us that flying with the army in those days was a rather slow process (compared with modern ambulance service) of following the fighting lines with emergency, or field hospital, aid:

"For the *Flying Hospital*—

There shall be a Director & Surgeon General, whose duty in subordination to ye Dir'r. gen'l. shall be to superintend and regularly receive from him a suitable number of large strong tents, Beds, Bedding, Medicine & Hospital stores for such sick & wounded persons as cant be transported to ye general Hospital with safety, or may be rendered fit for duty in a few days. He shall also see that the sick & wounded when in his hospital are properly attended & dressed & when able, to be conveyed to ye general Hospital, for which last purpose he shall be supplied by ye Dir. Gen'l. with a proper number of convenient Waggons & Drivers. He shall see that the regimental surgeons & mates attend their regiments. Those who refuse to obey his or ye Dir. Gen'l.'s directions shall be tried & punished as Congress shall direct.

He shall have under him—

Stewards to receive & properly dispense such articles of diet as ye Director General shall give or order to be given him by the Com'y. of ye Army or Hospital.—

Brigade Surgeons—who shall superintend the medical department in their respective Brigades, report the state thereof to the Direct'r of the flying Hospital & see that the sick & wounded are sent in proper time & in a proper manner to ye flying Hospital—they shall also attend & prescribe for ye sick & wounded in ye Hospital under ye Direction of ye Surgeon Gen'l.

A suitable number of mates to dress &c. & of nurses & orderly men, ye number to be determined & they appointed paid by ye Dir'r.—

All the above officers to be appointed & receive such Salarys as the Congress shall please to direct."

It may be interesting to note by the way, that this plan of Dr. Shippen's was adopted with some modifications on April 11th, 1777, and he himself was unanimously elected "Director-General of all the Military Hospitals for the Armies of the United States."

Gifts to the Library have seemed to be much to the fore during the last month. Mr. Mayo has informed us of another interesting historical piece that he proposes to give us for our walls. It is a steel engraving of Dr. Nehemiah Grew, secretary of the Royal Society, 1677-79, who was probably the first to observe sex in plants, and after whom the plant Grewia was named by Linnaeus.

Dean Rusby has greatly extended the gift list on the botanical side by presenting a most valuable set of thirty plates, many of these new drawings, for a new edition of "Quinologie de Mutis," by Triana. He obtained these at Bogota on his recent South American trip.

Dr. H. H. Schaefer has again contributed of his purchases from old-book shops two interesting volumes; one, the first American edition of Brande's "Manual of Chemistry," 1821: the other, a delightfully illustrated "Chemistry of the Arts," an industrial chemistry, which was based on Gray's Operative Chemist and published by Arthur L. Porter of the University of Vermont in 1830.

Dr. Otto Hensel, of the C. of P. class of 1895, sauntered in one day and left eight books on the Library tables. Some of these were especially useful in replacing imperfect and less well bound volumes in the periodical files, and were, therefore, especially appreciated by the librarians.

Dr. A. R. Bliss, Jr., C. of P. class of 1907 and of 1908, has presented the Library with the revised edition of his "Qualitative Chemical Analysis for Students of Medicine, Dentistry, Pharmacy, and Science," 1918. We are grateful to Dr. Bliss for his never-failing remembrance.

EVENING CLASSES DINNER

The fourth annual dinner and reunion of the student members, past and present, who have organized the "Students Society for the Advancement of Science" was held in Greenwich Village on the evening of May 23rd.

After the following "hooverized menu"

Olives Saucisson
Clams
Potage Ledoyen
Filet de Bass Vert' Pré
Pommes au Beurre
Carré d'Agneau Parisienne
Haricots Verts
Poussin grillé sur Canapé
Salade Mélangée
Mousse á la Fraise
Petits Fours
Café

had been disposed of and while the coffee was being consumed, Dr. Mansfield, who acted as toastmaster, called for remarks from several of the members present. One and all agreed that the good work of the night classes must be continued and promised Dr. Mansfield that even though he was going to Albany they would see to it that the classes would still receive their hearty support.

Among those present were:—Mr. and Mrs. D. Vilamena, Messrs. Henning, Mansfield, Wickham, Oberdorfer, Pape, Herman, Downer, Wall, Currens, Schaefer, Parker, Krumwiede and Hostmann.

UNIVERSITY COMMENCEMENT

The One-hundred and sixty-fourth Commencement of Columbia University was held at Morningside Heights on June 5th.

The degree of Pharmaceutical Chemist (Ph. Ch.) was conferred upon Henry C. F. Arnold, Joseph G. Concialdi, Jr., Louis R. Hyman and Harold MacAdams. Miss Josefina Argueso, a member of the class, was prevented by illness from finishing her examinations.

The Max J. Breitenbach Prize and the Kappa Psi Gold Medal were awarded to Henry C. F. Arnold, and Louis R. Hyman was the successful competitor for the George J. Seabury Scholarship providing for tuition during the fourth year of the University Course leading to the degree of B.S. in Pharmacy.

PROFESSOR MANSFIELD RESIGNS

Dr. William Mansfield, Professor of Pharmacognosy during the past ten years, has severed his connection with the College and will on July 1st, 1918 become Dean of the Faculty of the Albany College of Pharmacy. His many friends among the trustees, faculty, graduates and under-graduates wish him well. New York's loss will be Albany's gain. The Trustees have appointed Dr. Charles W. Ballard to fill the vacancy.

The many friends of "Dutch" Genung will be agreeably surprised to read the following:—"Mr. and Mrs. Fred Lincoln Ames announce the marriage of their daughter, Freda Corine, to Roland Boice Genung, Lieutenant, United States Army, on Wednesday, the eighth of May, nineteen hundred and eighteen, Newport News, Virginia."

THE LITTLE FLAG ON OUR HOUSE

By William Curtis Demorest, '81

Read at the forty-first annual dinner of the Class of 1881, Arts and Mines, held at the Columbia University Club on April 4

The little flag on our house
Is floating all the day
Besides the great big Stars and Stripes;
You can almost hear it say
To all the folks in our street,
As the breezes make it dance:
"Look up and see my one blue star—
We've got a boy in France!"

The little flag on our house,
It floats sometimes at night,
And you can see it 'way up there
When the street lamp shines just right.
And sometimes, 'long towards morning,
When the cop comes by, perchance
It signals with its one blue star:
"We've got a boy in France!"

The little flag on our house
Will wave, and wave, and wave
Until our boy comes home again,
Or finds in France his grave.
Nay—tho' its blue star turn to gold,
Because of War's grim chance,
It still shall wave to say: "Thank God!
We've got a boy in France!"

Reprinted from Alumni News by permission from *Leslie's Weekly.*

INFORMATION - BUREAU -

Conducted by Prof. H. V. Arny.

GENERAL INFORMATION.

1. Telephone inquiries will be answered cheerfully without charge. Residents of Greater New York or vicinity wishing to inquire about some pharmaceutical problem will ring up the Information Bureau, Columbus 117, and will receive information immediately, if same is accessible.

2. Non-residents will have their problems answered in the next issue of the C. U. C. P. ALUMNI JOURNAL without cost, if they send their inquiries by mail.

3. Those not wishing to wait for their information until the next issue of the JOURNAL, may have their inquiries *answered by mail by enclosing a self-addressed stamped envelope.*

4. Problems requiring extended research will be handled for a fee as moderate as consistent with high grade service.

5. Translations of articles from foreign languages, either in full or in abstract, as well as transcripts of papers appearing in English or American pharmaceutical works. The earliest refercals will be prepared for those desiring to pay for such service.

6. As in the past, all visitors to the library, desiring to do their own research work, will be given courteous attention.

H. V. ARNY, Librarian.
ADELAIDE RUDOLPH, Bibliography.
HUGO H. SCHAEFER, Queries.

ANSWERS TO QUERIES

Names of Manufacturers.—We gladly furnish our querists with information concerning the manufacturers of goods handled by the drug trade, but for obvious reasons, such answers are not published in this department.

Dose of Methylene Blue.—R. G. F., New York, has had a prescription calling for methylene blue capsules to be administered in doses amounting to 30 grains daily. The question is whether such dosage is safe.

The dose is away beyond the average dose given in the Pharmacopeia (2½ grains) and reference to other works (*Merck's Index*) brings out that the maximum dose is 15 grains daily. For this reason, we would hesitate about dispensing the 30 grains daily dose and would consult the prescriber about the matter.

Diluted Caustic Pencil.—M. C. D., New York.—Fused silver nitrate of the Pharmacopeia is made by melting 100 grammes of silver nitrate to which 4 grammes of hydrochloric acid have been added and then pouring the fused mass into moulds. If you wish to make a 30 per cent. caustic point, try mixing 30 grammes of silver nitrate with 70 grammes of either potassium or sodium nitrate, adding about 2 grammes of hydrochloric acid and then bringing the mixture to a state or fusion.

Legal Queries.—During the month, we have answered a number of queries relating to pharmacy laws, local, state, and national, emphasizing each time that the information given was merely the personal opinion of a layman. For this reason we do not print such answers, since in serious legal matters a lawyer should be consulted.

Philapod.—C. J. B., New York, in reading up on French soldiers' kits, finds among the articles enumerated the item, "philapod." He turns to us for information. We have searched French journals, books and dictionaries without finding the word, which clearly comes from two Greek words meaning "cover of the foot." We suspect that the military use of the word applies to some sort of foot-ease powder, a number of recipes for which are found in the books of our library. Have any of our readers further or better information on the subject?

What is Terra Alba?—R. B. S., New York.—This question was put in an interesting paper by Prof. C. H. LaWall in the *American Journal of Pharmacy* for February, 1913. Of course, we all know that it is a white earthy substance used to adulterate confectionery, but Professor LaWall found that authoritative books on chemistry and pharmacy either ignored the subject or gave remarkably discordant information. He finally decided that the best definition for terra alba is that given in Webster's International Dictionary of 1900, which states that it consists of "burnt gypsum, aluminum silicate (kaolin) or some similar ingredient, as magnesia." To this might be added the fact that barium sulphate is sometimes used as "terra alba."

Ammonium Sulphoichthyolate.—R. M. G., New Jersey, desires to know whether the requirements for the compound of the above-mentioned name, given in the Japanese Pharmacopoeia agree with the standards set for icnthyol.

We find that the specifications for the latter product given in New and Non-Official Remedies include: (a) not more than 47 per cent. loss on drying at 100° C.; (b) 5.7 to 6.2 per cent. of ammonium sulphate; (c) at least 10 per cent. of total sulphur; at least 5.5 per cent. of organic (sulphide) sulphur.

The Japanese Pharmacopoeia, on the other hand, accepts as ammonium sulphoichthyolate: (a) 50 per cent. loss on drying at 100°; (b) 7 to 8 per cent. of total sulphur. No standards are set for organic sulphur.

A curious result of wording is shown in this case, where we consulted the official English translation of the Japanese Pharmacopoeia of 1907. In the directions for the total sulphur assay, we find "If 0.5 gramme of the salt, dried at 100° C., be mixed with 2 grammes of potassium nitrate——the resulting solution should on addition of barium chloride solution, produce 0.51 to 0.62 gramme of barium sulphate." Do these directions mean weighing out of 0.5 gramme of the moist official product and then after drying, proceeding to add potassium nitrate, etc.? Or do they mean that the official product is to be dried, after which 0.5 gramme of the dry substance is to be weighed? If the first is intended the total sulphur content is fixed at 7 to 8 per cent. If the second obtains then the sulphur content should be 14 to 16 per cent.

Herniaria.—Z. A. B., New York.—You will find a description of this herb in the JOURNAL for January, 1918, page 8.

The Composition of Proprietary Preparations.—A number of queries to the composition of proprietary remedies have been answered by telephone during the past month, by reporting analyses published by chemists in various bureaus devoted to such work. For various reasons at this time we will not print the answers to such queries, but will refer our readers to the two publications of the American Medical Association, *The Propaganda for Reform in Proprietary Medicines* and *Nostrums and Quackery*, as well as to the Bulletins of the food and drug departments of the States of Connecticut, Ohio, Indiana and North Dakota, all of which we have in the library.

Elixir Vitae.—L. J. K., New York. —Hager's *Handbuch* gives the following recipe for "elixir vitae Matthiolus":

Oleosaccharum of anise
Oleosaccharum of fennel
Oleosaccharum of mace
Oleosaccharum of peppermint, of each 2.5
Aromatic water
Aromatic spirit of cinnamon, of each 40.0
Aromatic tincture
Tincture of cinnamon, of each 5.0

Marihuana and Indian Jand.—G. L. H., New York.—According to the Mexican Pharmacopoeia, marihuana is the Spanish name for cannabis indica, the other names for which as given in the same book are rosa maria and chanvre indien.

A colloquial East Indian name for cannabis is ganja: hence the origin, I presume of the second synonym you submit to me, Indian Jand.

Books on Drug Names.—G. L. H., New York.—As to books giving foreign names of drugs, there is no one book doing this in any complete way as the field is too vast to cover in one volume. The following list is given as comprising most of the languages regarding which you inquire:

Graa, *Manual of International Pharmacy.*, published by A. Graa, West Hoboken, N. J., gives Latin, English, German, French and Italian.

Rosseau.—*Poliglota Vade-Mecum Farmacio,* published by the American Esperentist Association, Washington, D. C., gives English, French, German, Italian and Spanish.

Slowniczek Apteczny, sold by the Polish Book Importing Co., 83 Second Ave., N. Y. C., gives Latin, German and Polish.

Novak & Roch, *Synonyma Apothecariorium,* published in Leipzig, Germany, gives Latin, German and Bohemian.

Benedict's Solution.—S. D. C., New York.—The latest recipe for this sugar testing solution, which has come to our attention, was published in the JOURNAL for March, 1917, page 48.

Dimethylamideazobenzene.—D. R. S., New York.—This dye, commonly called "butter yellow," is now included in the list of reagents given on page 530 of the present Pharmacopoeia. It is used as a diagnostic reagent in the examination of stomach contents: an alcoholic solution 1 in 200 being employed under the name of Töpfer's reagent; its use being as indicator in the determination of free hydrochloric acid in gastric analysis. It is now more frequently called dimethylaminoazobenzene.

ABSTRACTS

Conducted by Prof. George C. Diekman.

Corrosion of Metals

H. W. Doughty, in *Jour. Amer. Chem. Soc.*, 1917, 39, discusses the matter of corrosive action of moist carbon tetrachloride on metal containers, such as tin cans. He states that such action cannot be due merely to the action of hydrochloric acid, resulting from the hydrolysis of the organic halogen compound, upon the metal, since such action is found to be greatly increased, at least in the case of iron and copper, when ammonia is present. It was also found that the hydrolysis of carbon tetrachloride was greatly accelerated by iron and copper, and likewise by hydrogen and hydroxylions, particularly so at higher temperatures. Experiments made with a number of organic halides in order to determine their action on copper in presence of water and ammonia, showed that in the case of compounds containing a trichlormethyl group, the corrosion was most pronounced, while monochlor derivatives developed no appreciable reaction. The author also describes a color reaction for tetrachloroethylene, as follows: If this compound be allowed to remain in contact with water, ammonia and copper, for some time, the watery layer shows a bright-red coloration.

Determination of Woody Fibre

J. A. & E. W. Voelcker, in *Analyst*, 1918, 43. The authors call attention to the fact that in England the customary method for determining "woody fibre," is that devised by Voelcker, in which the hydrolysis of the fibre is effected by means of 2% sulphuric acid and solutions of caustic alkali of 2% strength. They likewise call attention to the fact that in the United States and in Continental countries, the official methods for determination of such fibre, deal with solutions of 1.25% strength. It is further stated that with solutions of these varying percentage strengths, discordant results are obtained. This is noted in examining oil cakes containing a quantity of hard husks, where considerable differences were noted. The authors claim that it is not possible to effect complete hydrolysis in palm nut and similar cakes, with solutions of less than 2% strength. The following method is recommended: After extracting the oil from 3 grammes of the specimen to be tested, the residue is boiled with 125 mils of 2% sulphuric acid, for a period of 30 minutes, keeping the volume of liquid constant by addition of water. Water is then added to the liquid to make this measure from 400 to 500 mils, and the solid matter allowed to sediment. The clear supernatant liquid is then passed through a linen filter, and the solid matter eventually also transferred to this and thoroughly washed, and later on transferred to the original container and boiled for a period of 30 minutes with caustic alkali solution, 2% strong. The same procedure as before is resorted to, and the residue finally washed with alcohol and dried at 100° C. to constant weight. The ash left after ignition is deducted from the weight of the fibre.

Substitutes for Platinum Ware

R. F. Heath, in *Met. and Chem. Eng.*, 1917, 17, reports on test made with a view of determining whether or not any substitutes for platinum ware were available. Crucibles made of platinum, gold, silver, nickel, fused quartz, and an alloy consisting of canadium 1 part, palladium 1 part, platinum 2 parts, and nickel 6 parts, were subjected to comparative tests. The tests consisted in subjecting the crucibles to a high temperature for a period of 32 hours, and immersion in strong acids, (hydrochloric, sulphuric and nitric), and determining their resistance to halogens, alkalies, etc. In the first test it was found that platinum gave the poorest results, losing 0,14% of its weight, as compared with silver 0,017%. In the second test (with acids), platinum showed to best results, but gold, canadium alloy and quartz also showed good results. The highest figure was 0,04% of loss for gold in hydrochloric acid, and 0,02% loss for the canadium alloy in nitric acid; silver showed better results in hydrochloric acid than did gold, but showed a greater loss in sulphuric acid, while nickel gave poor results with both. The experiments seemed to show that the canadium alloy was the best general substitute for platinum, its resisting powers being but slightly less. The melting point of the alloy is about 1570° C. and its cost only one-half that of platinum.

Precipitant for Sugars, Starches, etc.

W. Schulte, in *Chem. Zeit.*, 1917, 41, states that an ammoniacal lead acetate solution may serve as a precipitant for sucrose, invert sugar, dextrose, lactose, dextrins and starch from their aqueous solutions. Gum arabic, gum tragacanth, albumin, casein, pepsin, peptone and gelatin are also precipitated by this reagent. Citric, tartaric, malic, tannic, gallic and succinic acids and pyrogallol are precipitated by solution of lead acetate. Benzoic, salicylic and picric acids however are only precipitated by ammoniacal lead acetate solution. Phenol also is precipitated by the latter solution. It is important that the ammoniacal lead acetate solution be freshly prepared, as it undergoes decomposition very rapidly. It is made by mixing 100 mils of an aqueous saturated solution of lead acetate with 26 mils of water, and 8 mils of ammonia water, specific gravity 0,910.

It is stated that 1 part of gum arabic or phenol in 20,000 parts of water, will show a precipitate or turbidity with the reagent, while with sugars the limit is said to be about 1 in 10,000 parts. The precipitates obtained may be further treated by washing with very dilute ammonia water, then dried and weighed. The precipitate may also be ignited and the residue of lead oxide weighed. Factors are given for obtaining the quantity of substance present, either from the weight of the precipitate or from the weight of the lead oxide. The following are examples:

	Sucrose	Gum Arabic	Phenol
From weight of precipitate......	0.1727	0.2564	0.2636
of lead oxide......	0.2386	0.3703	0.3125

It is suggested that as glycerol is not precipitated by this reagent, that the latter may afford a means of separation of glycerol from sugars and other like bodies, in wines and allied liquids.

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EDITORIAL

AN APPEAL BY THE PRESIDENT OF THE ALUMNI ASSOCIATION

Alumni:

No matter how many years have passed since you obtained the coveted sheepskin from our institutuion, no matter what position you now occupy in this busy world, the education which you have received at our college has been instrumental in making your struggles easier and in establishing yourself in a firm position in life.

This fact alone should and must be sufficient to remind you that you owe a debt of gratitude to your Alma Mater, that you are under an obligation to the institution whence you derived the means for making your life a better one to live.

How can you best discharge this obligation? There is only one way to do it. It is a simple and an easy one: Take an active interest in the affairs of your college and lend your assistance, both moral and financial, to its Alumni Association! That is all we ask of you! The Alumni Association was founded primarily to advance the interests of the college, therefore, by supporting the Alumni Association you are directly supporting the college.

America, just now, is demonstrating that it can be devoted to, and fight for, an ideal. "Service" is the key-note of the day. And so I appeal to you to serve during the coming year in the ranks of our Alumni members. Serve in so far as generosity is concerned, serve in so far as steady attendance at our meetings is concerned. There is much to be done and workers are needed. I have a number of plans which if carried out would advance the interests of the college in the coming years; but I am powerless to put them into execution if your support and help are lacking.

I will take the liberty of addressing you again by the medium of this Journal and ask respectfully that you will give careful attention to what I will have to say.

Fraternally, (Signed) Curt P. Wimmer,
President of the Alumni Association.

THE FEDERATION OF PHARMACEUTICAL BODIES*

By H. V. Arny

It was the writer's fortune or misfortune to be honored with the chairmanship of the committee appointed by President A. R. L. Dohme of the American Pharmaceutical Association to consider the federation of American pharmaceutical organizations under the aegis of the oldest national pharmaceutical body in the country, the A. Ph. A. This Federation Committee began its work the early part of the current year and is still continuing its deliberations.

The idea of a federation of the several national bodies representing various branches of the drug trade was put forward by Henry P. Hynson in 1916 in his masterly address as chairman of the house of delegates of the A. Ph. A. Dr. Hynson's idea was to make the house of delegates the rallying point at which all pharmaceutical bodies, including State pharmaceutical associations, could gather to their mutual advantage.

In his presidential address at Indianapolis last year, Dean Wulling discussed at length a plan of federation in which a Greater A. Ph. A. in conjunction with other national bodies would form a great organization of far-reaching influence, with journals, research laboratories and other means of disseminating pharmaceutical knowledge. He expressed the opinion that the raising of one million dollars for these beneficent purposes was a task by no means impossible.

Since assuming the presidency of the A. Ph. A. by reason of the untimely passing of our dear friend, Mr. Holzhamer, Dr. Dohme, with his characteristic energy, has gone into the federation idea with all of the enthusiasm for which he is noted. He has submitted a plan of federation that is familiar to most of us here present since it has been given prominence by the pharmaceutical press during the past few months. Briefly summarized Dr. Dohme's plan proposes federation more quickly than can be expected if the project is to depend upon the prior raising of a large sum of money. He believes that the present national drug associations with their already existing machinery of organization; with the wealth behind some of them; the numbers behind others; can be federated into a great body wielding tremendous influence, potential of great good to the public as well as to pharmacy. His plan employs for the federating, the present council and house of delegates of the A. Ph. A., with, of course, amended personnel and with enlarged powers. He also suggests several bureaus of service; a bureau of chemical aid and research, a bureau of legal information, a bureau of employment, a bureau for the exchange of certain goods and last but most important a legislative bureau designed to protect pharmacy from the continual assaults made against its interests by overzealous or half-baked legislation.

That Dr. Dohme's plan is highly attractive goes without saying; that it will be difficult to accomplish is obvious; but that it is impossible as some of its critics seem to think, is not the opinion of the writer, who has been forced by his work on the Federation Committee to give it careful attention.

It would be the height of bad taste for the writer or any member of the Federation Committee to express positive opinions as to details of any federation plan until the committee as a whole has arrived at some positive conclusions. The problem is too big to decide in a few weeks or even a few months. Our committee has already learned that it is well nigh impossible to arrive at a decision by mail; hence plans are now being inaugurated to hold a committee conference in Chicago prior to the meeting of the A. Ph. A. in August.

---

*Read at the 48th Annual Session of The N. J. P. A.

On the other hand a discussion of the general features of federation is both timely and important and this paper is being read for the main purpose of finding out the opinions of the members of this Association on the subject; to begin a discussion that may be of value to the Federation Committee in arriving at conclusions. In beginning this discussion the writer will quote what he has published elsewhere on the subject:

> "The general idea of federation is worthy of our most serious consideration, for the plan is laden with tremendous possibilities for good, if wisely planned and is fraught with distinct danger if carelessly and hastily contrived.
>
> "No one can gainsay the immense influence that could be wielded by a united pharmaceutical America, retail, wholesale and manufacturing, when banded together in a common cause. Think of the legislative influence that could be wielded by the 100,000 Americans directly or indirectly interested in the drug trade, if welded into a flexible whole. Again, think of the possibilities of pharmaceutical betterment suggested by a huge federation with means enough at its disposal to conduct laboratories, legal bureaus and other aids avaliable to every member of the federation. Most alluring is the picture thus presented.
>
> "On the other hand the creation of such a federation will be accompanied by many difficulties. How can such diversified interests as manufacturing, wholesale and retail pharmacy get together upon a broad basis of mutual agreement? It can be done only by settling upon points of agreement and by leaving the points of disagreement to the separate trade organizations. The differences of viewpoint existing among the various lines of pharmaceutical endeavor are no farther apart than are the viewpoints of Oklahoma and New York, let us say. The experiment of federal government has stood the test of over a century including a veritable test by fire, the Civil War. The success of this national federation of conflicting interests is largely due to the fact that basic principles of our government are a federation for mutual defense; a confederation for mutual benefit. As long as our government stands for these two principles; as long as it abstains from attempts to force the local opinions of New York upon Oklahoma and vice versa, its success is assured.
>
> "In the proposed pharmaceutical federation, the same spirit should prevail. We have ever with us a need of defense in the thousand different kinds of legislation that zealots outside of the calling try to force upon the trade. The first principle of the federation should therefore be uniformity in legislative matters and a strong committee consisting of members of the legislative committees of the several national associations should be the first duty

of the federation. The Drug Trade Conference has shown what can be done in this line when action is based on mutual interests rather than class advantages, and if the pharmaceutical federation becomes an accomplished fact, it will take over the present functions of the Drug Trade Conference.

"One of the greatest bonds that binds the several States of our Union together is the service rendered by the Federal Post-Office Department and similar bureaus whose heads form the National Cabinet. Even so, if the pharmaceutical federation is to succeed, it must have service features that can be used by all diversified branches of American pharmacy. As mentioned above, it is in this direction that the Dohme plan is peculiarly attractive."

That is as far as the writer cares to go in expressing, for the present, his views of the proposed federation. He desires to hear the views of others, notably those who have had active connection with other national pharmaceutical bodies, which must be included in the federation if it is to be a real success. He stands ready to explain, to the best of his ability, details of the several plans of federation that have been thus far proposed. And above all, he urges this Association to see that it is represented by its strongest members at the meeting of the house of delegates of the A. Ph. A. in Chicago when the federation idea is to be discussed from all angles.

UTILIZATION OF AVAILABLE PHARMACEUTICAL FORCES*

By George C. Diekman

For some time past our State Board of Pharmacy has viewed, with much concern, the ever increasing scarcity of suitable and available help, both professional and non-professional, as far as the pharmacist is concerned. It may be said that this is not a problem that the members of a State Board of Pharmacy, acting as such, should be concerned about. While the powers and duties of Boards of Pharmacy are numerous and varied, none of these would seem to empower it to act in matters of this nature. Still, any situation so manifestly operating to the detriment of not only the pharmacist but the public as well, cannot fail to attract the attention of the authorities charged with the enforcement of that part of the Public Health Laws, known as the Pharmacy Laws. That the situation is an acute one goes without saying. That it is receiving attention and study is likewise true. For several years, each President of our State Pharmaceutical Association has devoted a considerable part of the customary annual address to a discussion of this problem, and the same is true of other State Pharmaceutical Associations.

Time was when the supply of available help, professional and non-professional, registered and non-registered, was far in excess of the requirements and the demand, but gradually this situation has changed, until at the present moment the reverse condition confronts us. This state of affairs is very general, and not at all local in character, due perhaps to local conditions only. States in which the so-called "Prerequisite Law" is not a factor, are faring no better nor worse than those operating under such laws. I am not going to discuss, at any length, the

*Read at the 48th Annual Session of The N. J. P. A.

causes which are responsible for this situation or condition, as that is not the purpose of this paper. It is apparent however that the causes are many and varied, and that they are not the same in all localities, though they tend to produce the same result, namely shortage of help. It is of course understood and agreed that the needs of our Government, in these troublesome times, has aggravated the situation very materially. The situation was far from comfortable however, even prior to the time that this additional drain upon the man power of our Country became a necessity. I am also convinced that the progress which has been made in uplifting the practice of pharmacy during the last decade, a progress greater in some spots than in others, but progress everywhere nevertheless, is at least in a measure responsible for the situation which now confronts pharmacists. Two other factors responsible for this shortage of help, or which at least contribute largely to make it a reality, are the matter of hours of employment and the matter of remuneration.

Other avenues, many of them more attractive, nearly all of them at least as attractive as is the field of Pharmacy, are open at this time, to both young men and women seeking employment. Special inducements are being made to high school students of both sexes, in many parts of the country, by a number of commercial activities, among them some of the largest and most influential in our business world, to leave their studies and to embark in commercial enterprises, and I am creditably informed that many of those approached are leaving the class room for service in the business world.

The members of our State Board of Pharmacy, individually and collectively, have, for some time, given this matter much thought and attention, and have sought to suggest or devise ways and means whereby, even if ever so little, the situation might be ameliorated. Two ways presented themselves by means of either of which, or by means of both of which it was felt the situation might be bettered. The first of these deals with the proposition of increasing the number of those attending our schools of pharmacy, and of those who seek employment in a pharmacy or drug store for the purpose of work and study, and who in due time, after having gained the necessary experience, and the necessary knowledge, will take part in the licensing examination of some State Board of Pharmacy. It is obvious that both of these propositions can better be taken care of by the colleges and the pharmacists themselves.

The second way deals with the matter of adopting measures for a more thorough and proper utilization of the means and materials already at hand, more especially so, as far as the gradutes of schools of pharmacy, who have not completed fully their term of practical experience, or who cannot yet meet the age requirement, are concerned. This aspect of the situation I will take the opportunity to further discuss.

As you all know, students are admitted to most schools of pharmacy, without necessarily having had any practical experience in a pharmacy or drug store. Whether this in principle is right or wrong, is not the question under discussion at this time. The fact remains that students are so admitted to the courses given, at most of our pharmacy schools. After they have, at the end of a two year course, or less frequently, a three year course, successfully completed the requirements of such course and have passed a successful examination, they are awarded a diploma, as evidence of this. They are then required to gain whatever additional experience is needed, and after this may be admitted to the licensing examination for pharmacist. In most states, the period of experience required extends over four years, college time being counted as store experience.

In the meantime, the services of such graduates, at least until very recently, were not especially sought, they were given no especial rights and privileges, nor were they particularly favored in the matter of obtaining remuneration for their work. They were practically on a par with an unlicensed person, without diploma. This was necessarily the case, they not being in position to obtain a license to practice pharmacy, and the law not authorizing their employment, except in what is known as a junior capacity. It was for the purpose of obviating this situation or condition, and to make available a goodly number of young women and men, graduates of the schools in our State, as well as those in other states, for service of a higher grade and character, than our law heretofore permitted, in our pharmacies and drug stores, that the members of our State Board of Pharmacy suggested the creation of a new grade of license, to be known as Junior Pharmacist. In order to make this suggestion operative, new legislation was required, and such was obtained, through medium of our State Pharmaceutical Association, and its Legislative Committee. The necessary amendment to our Public Health Laws was passed by our State Legislature, and the measure was signed by Governor Whitman, and is now a part of the laws of New York State. This new law in brief provides for the following:

> JUNIOR PHARMACIST:—They (the Board of Pharmacy) shall admit to the examination for junior pharmacist any candidate that pays a fee of ten dollars and
>
> 1. Is more than 19 years of age.
> 2. Is of good moral character.
> 3. Has had prior to January first, nineteen hundred and eighteen, fifteen academic counts, or the equivalent, before beginning the first year of study in the school, and after that date had thirty academic counts, or the equivalent, before beginning such study.
> 4. Has studied pharmacology as outlined in the syllabus not less than two years in a school.
> 5. Has received the diploma of graduate of pharmacy from a school.
> 6. Has had two years' experience in a registered pharmacy or drug store under the personal supervision of a pharmacist or druggist, all of which experience must have been in a pharmacy or drug store in New York State.
>
> The questions for examination for licensed pharmacist and junior licensed pharmacist shall be identical. An applicant for examination for junior pharmacist shall be eligible to take the examination in theoretical subjects only. Such applicant may, subject to the rules of the Board, upon completing four years' actual experience in a pharmacy or drug store, pro-

> vided such applicant is over twenty-one years of age, be admitted to the examination in practical pharmacy, and if successful, the board shall grant such applicant a pharmacist's license.
>
> A junior pharmacist may, subject to the rules of the board, have temporary charge of a pharmacy or drug store, but during such temporary charge shall not compound or dispense physicians' prescriptions.
>
> This act shall take effect immediately.

It will be noted that all persons, who have successfully met all of the requirements of this act, may, subject to the rules of the Board, have temporary charge of a pharmacy or drug store, but shall not have the privilege of compounding or dispensing physicians' prescriptions. Such person may, however, sell many articles, during the absence of the licensee, not permitted to be sold by what is known as a junior clerk.

As yet, no examination for the grade of junior licensed pharmacist has been conducted. It is expected, however, that such examination will be held during the month of June and I am informed that many graduates, who cannot meet the full requirements, at this time, have applied for admission to this examination. I would also call attention to the fact that no attempt has been made, or was contemplated to be made, to abrogate, in any way, the four years' practical experience requirement, embodied in most pharmacy laws, however desirable such action may have seemed to some. Whether or not this four year experience requirement is a wise or even expedient provision at this time, is to say the least a debatable question, and one which is not being discussed here. That the matter is attracting general attention, however, is very apparent. President Rufus A. Lyman, of the American Conference of Pharmaceutical Faculties, thought the matter of sufficient importance to give it considerable attention in his annual address to the Faculties, at the Indianapolis meeting. He says as follows:

The Apprentice System

"I cannot close without offering a protest against the apprentice system. The tendency in these latter years is to increase the length of apprenticeship. The excuse is to make better men. The way it works is to crush the spirit out of a man who has any spirit, and leave in Pharmacy a lot of corpses. I maintain that a well trained college man going into an ordinary store after graduation is in a position to acquire more information regarding the conduct of a business in six months than the average flunkey who hangs around a store for six years. And yet when it comes to taking the Board examination he and the flunkey are brought to the same time requirement. If a well trained college man cannot learn to operate a certain store in four years, he can't in five. Can we not wake up like other professions and devise some common sense scheme that will not act as a crushing mill to both individual and to professional pharmacy?" I recommend that our committee on relations of Colleges of Pharmacy with Boards be instructed to express the view above as the sentiment of the Conference, and that this committee in conjunction with the proper committee of the Boards be requested to devise a plan which can be developed that will render justice to all, and that progress in the matter be reported as early as possible."

Permit me to say, lest I be misunderstood, that I do not agree with these sentiments in their entirety, but only in small part. I quite understand and appreciate that the training received in a properly conducted pharmacy or drug store, is of invaluable aid to the student of pharmacy, and that it cannot be replaced by the training or teaching of a modern pharmacy school. I believe that if we desire to make true progress in elevating pharmacy, it will become more and more apparent that such experience is needed.

Just what rules our Board will formulate in connection with the junior pharmacist license, I am unable to say. Some action will in all probability however be taken on occasion of the June meeting of the Board. It remains to be seen of course to just what extent the passage of the law creating this new grade will remedy the conditions of which we complain. It is however certain that a considerable number will be added to those who are by law privileged to remain in charge of an establishment, during the temporary absence of the licensee.

In closing permit me to express my sincere appreciation of the good work done, and the many admirable things accomplished by your State Association, more especially during recent years. All this works for the advancement of pharmacy, and matters pharmaceutical, and I feel confident when the progress pharmacy has made is more generally seen and acknowledged, that your work will be duly appreciated. I would also say a word concerning the cordial and fraternal relations which obtain between the Boards of Pharmacy of our respective States. We have found the Secretary and members of your Board most ready to assist us in carrying on our work, and we have in turn endeavored to reciprocate whenever possible. Conservation of forces and conservation of energy is the watch-word of our time, and the advancement of pharmacy will, I feel sure, be furthered by the cultivation and continuance of the pleasant and friendly relations existing between the pharmacists and their representatives of our States.

VARIATIONS IN NUX VOMICA AND ITS PREPARATIONS*

By Hugo H. Schaefer

One of the more important changes in the U. S. P. IX as compared to the former revision is that of the alkaloidal requirement for Nux Vomica and its assay process. The former requirement called for 1.25% strychnine and in its determination the well known assay process was used in which the total alkaloids are extracted, the brucine destroyed by means of nitric acid and the remaining alkaloid calculated as strychnine. In the U. S. P. IX the requirements are for 2.5% total alkaloids and the assay process is of course based on the simple extraction and weighing of all the alkaloids of Nux Vomica.

It was found by the author that a greater percentage of samples of Nux Vomica met the requirements of the new pharmacopoeia than that of the old. In other words that 2.5% total alkaloids was a lower standard than 1.25% strychnine. In order to definitely determine this question a number of samples of powdered Nux Vomica were taken and assayed according to the U. S. P. IX for total alkaloids.

*Read at the 48th Annual Session of The N. J. P. A.

After titrating the latter the solution was made alkaline with ammonia water, completely shaken out with chloroform, the latter evaporated and the residue taken up with 15 mils of 3% sulphuric acid. This solution was now treated with nitric acid to destroy the brucine and the assay completed as described in the U. S. P. VIII, for the determination of strychnine. This data so obtained gave the total alkaloidal content, the percentage of brucine and that of strychnine in Nux Vomica, it being taken for granted that the other alkaloids present appear in so small a quantity as to justify their not being considered. The results obtained were as follows:—

Powdered Nux Vomica: U. S. P. VIII = 1.25% strychnine
U. S. P. IX = 2.5% total alkaloids

Sample	Total alkaloid Method U.S.P. IX	Strychnine Method U.S.P. VIII	Brucine by difference
A	2.64	.88	1.76
B	2.93	1.32	1.61
C	2.52	.73	1.79
D	1.92	.73	1.19
E	2.97	1.54	1.43
F	3.21	1.25	1.96
G	2.71	1.30	1.41
H	3.53	1.30	2.23
I	2.38	1.26	1.12

A number of interesting points may be obtained by studying these results. Of the nine samples all but two would come up to the requirements of the U. S. P. IX while three would not meet those of the U. S. P. VIII. Samples A and C would pass U. S. P. IX but not U. S. P. VIII. Sample D would pass neither the old nor the new requirements, while sample I would pass U. S. P. VIII and not IX. There therefore seems to be absolutely no relation between the percentage of total alkaloid and that of strychnine. The percentage of strychnine in the total alkaloid varies from 33 to 53%.

Samples of fluidextract and tincture of Nux Vomica were now taken at random and assayed in similar manner as before described, first in accordance with the U. S. P. IX to determine total alkaloid after titration was shaken out with chloroform and the strychnine determined according to U. S. P. VIII with the following results:

Fluid Extract: U. S. P. VIII = 1% strychnine
U. S. P. IX = 2.37 to 2.63% total alkaloids

Sample	Total alkaloid Method U.S.P. IX	Strychnine Method U.S.P. VIII	Brucine by difference
A	2.46%	.79%	1.67%
B	2 64	1.27	1.37
C	2.51	1.03	1.48
D	2.39	.91	1.48
E	2.41	1.21	1.20
F	2.48	.77	1.71

EXTRACT: U. S. P. VIII = 5% strychnine
U. S. P. IX = 15.2 to 16.8% total alkaloids

Sample	Total alkaloid Method U.S.P. IX	Strychnine Method U.S.P. VIII	Brucine by difference
A	15.41%	4.93%	10.48%
B	16.32	6.69	9.63
C	14.89	5.21	9.68
D	17.10	8.21	8.89
E	15.61	6.71	8.90
F	16.45	6.01	10.44

TINCTURE: U. S. P. VIII = 0.1% strychnine
U. S. P. IX = 0.237 to 0.263% total alkaloids

A	0.241%	0.111%	0.130
B	0.271	0.084	0.187
C	0.213	0.079	0.134
D	0.224	0.114	0.110
E	0.251	0.080	0.171
F	0.249	0.102	0.147

Again the results show that there is absolutely no relation between the percentage of total alkaloid and that of strychnine and some of the samples while meeting the requirements of our present Pharmacopoeia show a decided deficiency in strychnine content as required by the U. S. P. VIII.

The question therefore suggests itself whether it would not be better to have both a requirement for total alkaloid and for strychnine. Considering the results obtained from the powdered Nux Vomica, sample C contained 2.52% total alkaloid and yet is of decidedly inferior quality since it only contains .73% strychnine. On the other hand sample I contains 1.26% strychnine but only 2.38% of total alkaloids, therefore also of inferior quality. In the opinion of the author no difficulty would be had in obtaining Nux Vomica on the market, which contains at least 2.5% total alkaloids and 1.25% of strychnine. The combination assay process as suggested before could be used, thereby requiring only one sample for the entire assay and making it little more difficult and complex than the assay of the U. S. P. IX.

EVENING COURSES

The evening courses of instruction, designed for the benefit of special students as well as members of the regular classes, will open October 1st and will continue for thirty weeks on Wednesday, Thursday and Friday evenings, to April 24th.

Instruction will be given in qualitative, volumetric, gravimetric, chemical, microscopic and water analysis. Elementary pharmacy, pharmaceutical manufacturing, chemistry and manufacture of synthetic remedies, testing and assaying of galenicals. Microscopical pharmacognosy, microanalysis of foods, principles and practice of bacteriology, bacterial examination of water, etc.

FROM THE LIBRARY

ADELAIDE RUDOLPH

Assistant Librarian

About the most persistent note sounded by the journals on our library tables to-day is the call to young women to "come over and help" the pharmacists. It is the same cry, from New York to San Francisco.

On the New York side, Mrs. Emma Gary Wallace, in the June number of the Pharmaceutical Era, voices this urgency with an appeal to every woman now interested in pharmacy to do her utmost to put other women into training:

"Only a few short months away is the beginning of the college year which should see large numbers of women students enrolled to undertake serious preparation for this work, and during the months of the coming summer these students will be able to gain valuable experience in practical drug store work, for the call for assistance is much greater than the supply.

"Then let every woman pharmacist do her part to persuade one or more bright young women about her to prepare for this line of work."

In San Francisco, *The Pacific Pharmacist* devotes a large part of its editorial space in its June number to "Women and Pharmacy":

"For many years women in small numbers have been gradually working into this honorable calling. Until recently, however, competition with their brothers has been so keen that they were largely excluded from the actual retail trade. This, we take, was largely due to the fact that the men were able to stand longer hours and severely confining work. The women during this period were largely concerned with work in private dispensaries, hospitals and manufacturing concerns. This picture has now materially changed. Retailers are now glad and very anxious to obtain competent women. Working conditions are now far more congenial, and the hours are within reason.

"The wages in this kind of work are much better than in other lines of similar nature. The work is not heavy. It requires accuracy, neatness, cleanliness and faithfulness. The average trained woman can comply with all of these readily.

"We need women in Pharmacy today because of the vast call for young men in the military service. It is work peculiarly adapted to women, and we should make every endeavor to encourage as many as possible to go to school and take up this new line of work. The public needs in pharmaceutical lines may be intrusted to capable women."

Now, what has the College library to do with this? Perhaps nothing, as far as any technical understanding of the situation is concerned. But because this urgent appeal naturally strikes the eye of a librarian before it reaches others who do not make it their business to read the journals so carefully, it seems to be, as to one nearest within call, a librarian's duty to render first aid in handing the message on to the "many who," as Mrs. Wallace has said, "will pass the opportunity by because it never occurs to them." For that reason I have interested myself in making a little memorandum, to pass on as best I may, of what opportunities await the young woman who has taken training in the Columbia University College of Pharmacy:—

After a four years' course of study and practical work, which entitles her to take the State examinations for a license, if she obtain that license, she is eligible to a position in a hospital or drug store at a salary of from $75.00 to $125.00 a month. Even after the two years of required study, and without the practical work, she is eligible to good paying positions in chemical laboratories. Two or three girls belonging to the most recent classes have obtained positions in a chemical laboratory near New York at $85.00 a month and board.

As there will also hereafter be opportunities in part-time positions in the New York drug stores for young women to gain practical experience while studying, as hitherto there have always been for young men, it will not be impossible for an energetic young woman to earn enough money, during most of the time at least, to pay current expenses.

It is worthy of note, that every woman graduate of the College, who desires a position, has one, and at a salary on the average of $100.00 a month; also that, according to the calls that are continually addressed to the Office, many more women having had the proper training in pharmacy are needed. This fact, certainly, ought to be called to the attention of the young women living in this vicinity, who are now trying to make choice of some suitable work or profession for which they should prepare. And in these days, life is not going to mean what it should to girls, as well as to boys, unless they do prepare themselves to do something eminently well.

Professor Diekman was elected an honorary member of The New Jersey Pharmaceutical Association at the 48th Annual Session held at Spring Lake, June 18th to 21st.

Professor Hostmann has been reelected Secretary of The New Jersey Pharmaceutical Association and Doctor Hugo H. Schaefer has been appointed chairman of the Committee to Detect Adulterations.

John M. Williams, '05, Phar. D. '06, Instructor in the Department of Analytical Chemistry, is carrying out research work on protective ointments against the action of "mustard gas." He is stationed at George Washington University, Washington, D. C.

Harold MacAdams, Ph. Ch. '18, who on July 1st was appointed Instructor in the Department of Pharmacy, has enlisted in the Naval Reserve and is awaiting his call.

INFORMATION - BUREAU -

Conducted by Prof. H. V. Arny.

GENERAL INFORMATION.

1. Telephone inquiries will be answered cheerfully without charge. Residents of Greater New York or vicinity wishing to inquire about some pharmaceutical problem will ring up the Information Bureau, Columbus 117, and will receive information immediately, if same is accessible.

2. Non-residents will have their problems answered in the next issue of the C. U. C. P. Alumni Journal without cost, if they send their inquiries by mail.

3. Those not wishing to wait for their information until the next issue of the Journal, may have their inquiries *answered by mail by enclosing a self-addressed stamped envelope.*

4. Problems requiring extended research will be handled for a fee as moderate as consistent with high grade service.

5. Translations of articles from foreign languages, either in full or in abstract, as well as transcripts of papers appearing in English or American pharmaceutical works. The earliest refercals will be prepared for those desiring to pay for such service.

6. As in the past, all visitors to the library, desiring to do their own research work, will be given courteous attention.

H. V. Arny, Librarian.
Adelaide Rudolph, Bibliography.
Hugo H. Schaefer, Queries.

ANSWERS TO QUERIES

Obermayers Reagent.—T. M. S., New York.—In "Merck's Reagent Guide" are given two reagents of Obermayer. One, for albumin, is based upon the formation of a diazo compound, when albumin is treated with nitrous acid, followed by phenol and alkali. The usual one however is his reagent for indican, which consists of fuming hydrochloric acid to which 0.2 to 0.4 per cent. of ferric chloride has been added. When a given volume of this is added to an equal volume of urine that has been clarified by treatment with lead acetate and filtration, an indigo-blue color is produced when indican is present. This can be shaken out into chloroform in order to make the color more distinct.

Anacahuita Wood.—C. J. H., New York.—This drug is recognized in the Mexican Pharmacopoeia, where the synonymes siricote, trompillo and amacuahuitl are given. The pharmacopoeia also states that it is the wood of Cordia Boissieri, which grows in the mountains around Tampico and Monterey.

We find an illustrated article on the drug, by Daniel Hanbury in the *Pharmaceutical Journal* for December, 1862, page 271, in which it is stated that it was introduced from Tampico into Germany as a remedy for phthisis, but that it proved unavailing. An analysis of the wood by Buchner in 1861 failed to show any medicinal constituents beyond tannin and mucilage.

Darken's Solution.—J. B. T., New York.—No reference to any such solution can be found in the many works of reference consulted by us. We suspect what was really intended was Dakin's solution, the now famous hypochlorite solution, used so successfully by Dr. Carrell in the treatment of wounds. A comprehensive account of this preparation is found in the *American Druggist* for March 1917, index page 97. At this place, we will merely state that it is a solution of sodium hypochlorite containing not less than 0.4 nor more than 0.5 per cent. of available chlorine and that it is made according to Daufresne's improved technic by mixing 184 grammes of 25 per cent. chlorinated lime with 5 liters of water; by making a solution of 92 grammes of dried sodium carbonate and 76 grammes of sodium bicarbonate in 5 liters of water; by mixing the latter with the chlorinated lime mixture; and after one-half hour syphoning off the clear liquid. If the chlorinated lime contains more or less than 25 per cent. available chlorine different proportions (given in the article referred to) of both the lime and the sodium salts must be used.

Maurel's Reagent.—K. R. N., New York.—This reagent is made by mixing together 25 mils of 33 per cent. aqueous solution of sodium hydroxide, 5 mils of 3 per cent. aqueous solution of copper sulphite and 70 mils of glacial acid. This reagent has been recommended by Gauthier as a means of differentiating between egg albumin and the albumin of pathological urine; coagulating the former and not the latter. The advantages and weaknesses of this reaction are elaborately set forth by Hollande and his coworkers in a series of articles found in *Journal de Pharmacie et de chimie,* 11 (1915) 345, 15 (1917) 65 and 16 (1917) 193.

The importance of differentiating between egg albumin and pathological albumin in urine is because soldiers feigning illness have been known to introduce egg albumin into urine samples before they are submitted for analysis.

Names of Manufacturers.—We gladly furnish our querists with information concerning the manufacturers of goods handled by the drug trade, but for obvious reasons, such answers are not published in this department.

Legal Queries.—During the month, we have answered a number of queries relating to pharmacy laws, local, state, and national, emphasizing each time that the information given was merely the personal opinion of a layman. For this reason we do not print such answers, since in serious legal matters a lawyer should be consulted.

The Composition of Proprietary Preparations.—A number of queries to the composition of proprietary remedies have been answered by telephone during the past month, by reporting analyses published by chemists in various bureaus devoted to such work. For various reasons at this time we will not print the answers to such queries, but will refer our readers to the two publications of the American Medical Association, *The Propaganda for Reform in Proprietary Medicines* and *Nostrums and Quackery,* as well as to the Bulletins of the food and drug departments of the States of Connecticut, Ohio, Indiana and North Dakota, all of which we have in the library.

ABSTRACTS

Conducted by Prof. George C. Diekman.

Deterioration of Lime

S. A. Woodhead, in *Analyst,* 1913, 43, states as follows: If powdered lime be kept in dry storage, and fresh surfaces frequently exposed, 43 per cent. of the mass will be converted into carbonate during 64 days. Lime exposed for a period of 4 months, without turning, and in open air, was converted to the extent of 12 per cent. only. Lime is masses stored in bags, and protected from moisture, was converted into carbonate to the extent of 38 per cent., but when the masses were heaped and exposed to air, the loss was 52 per cent.

Haematoxylon Africanum

In 1909 a species of Haematoxylon was discovered in Great Namaqualand, South-Africa. This species consists of a shrub-like plant, from 1 to 1.5 meters in height, with leaves smaller than those of Haematoxylon campeachianum, and bearing yellow flowers. The stems consist chiefly of a reddish-brown central portion, surrounded by a nearly colorless layer of woody fibre, and are from .5 to 1.25 inches in diameter. The central core upon exposure to air darkens considerably as is the case with logwood. An extract prepared from this plant, yields color reactions more closely resembling those of Brazil wood, than those of logwood. With ferric chloride a brown color is noted and with lead acetate a precipitate possessing a pale pink color is formed. Mordaunted wool when treated with the extract of this plant, showed colors similar to those obtained upon treatment with Brazil wood, but duller in appearance, and deficient in the red constituent. A. G. Perkins, in *J. Soc. Dyers & Col.,* 1918, 34, claims the extract obtained from this plant is of no technical importance.

Oil from Liver of Dog Fish

A pale-yellow oil, which at 10° C. becomes semi-solid, because of the separation of solid glycerides, is obtained when the liver of the ordinary dog fish (Squalus acanthias), is extracted with steam under pressure. The yield is from 40 to 50 per cent. Two samples of this oil, obtained from different lots of dog fish livers, were found to possess the following physical and chemical qualities. Specific gravity, at 15° C., 0.9175 and 0.9186; refractive index at 20° C., 1.4755 and 1.4749; saponification value, 161 and 168.3; iodine value, (Wijs), 123.3 and 123; free fatty acids, calculated as oleic acid, 0.33 per cent. and 0.42 per cent.; unsaponifyable matter, 32.94 per cent. and 49.48 per cent. These results were obtained from oils which had been cooled and the solid matter separated. A. C. Chapman, in *Analyst,* 1918, 43.

Straw Used for the Production of Gas

This subject is discussed in *Gas Journal,* 1917, 140, 326, by R. D. M'Laurin. The author calls attention to the large waste of straw annually in Canada alone, and has studied the possibility of utilizing such waste as a source for gas. The straw to be used must first be compressed into bales to a density of 25 pounds per cubic foot. The compressed material is placed in a highly-tempered steel retort, 7½ feet long, 2 feet wide and 6½ inches deep, fitted with a fire box and inclosed in a proper casing. The author estimated the present cost of retort together with scrubber and gas-holder, at 105 Pounds, in Canada. The maximum temperature applied reaches 500° to 600° C. and from 30 to 45 minutes suffice to complete the removal of the gas. It is estimated that one ton of straw will yield from 11,000 to 12,000 cubic feet of gas, from 6 to 8 gallons of ammoniacal liquor and tar, and about 600 pounds of carbon. Of the gas obtained about 30 per cent. is employed to assist in the destructive distillation of the straw, leaving about 7,000 cubic feet available for other purposes. This surplus possesses a calorific value of 400 British thermal units for each cubic foot, which is the equivalent of about 25 gallons of petrol. The gas obtained is a mixture of methans, hydrogen and carbon monoxide, and may be used for all purposes for which coal gas finds employment.

Acetylsalicylic Acid

P. N. Leech, in *J. Ind. Eng. Chem.* 1918, 10, reports on the examination of a number of samples of acetylsalicylic acid, of American source. He states that the purified acid melts at 131.5-132.5 C., and that 14 samples of American origin which had been examined by him possessed a melting point ranging between 128 and 133° C. Leech states that this range of melting point is probably more correct than the range given in the British Pharmacopoeia (133°-135° C.).

All commercial samples examined by him, with a single exception, contained less than 0.1 per cent. of uncombined salicylic acid, the determination being made colormetrically. He proposed that this limit should be adopted officially.

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Columbia University

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The Isaac Plaut Fellowship provides seven hundred and fifty dollars annually, for one year of study at a foreign university, for the Bachelor of Science in Pharmacy who holds the highest rank among the members of his class.

The Max J. Breitenbach cash prize of two hundred dollars and the George J. Seabury scholarship provide tuition fees for the fourth year to the two students standing highest at the close of the third year.

The Trustees also award three cash prizes of one hundred dollars each, for special proficiency in chemistry, pharmacy and materia medica, to members of the second year class.

The Louis Dohme prize consists of one hundred dollars in cash for special proficiency in pharmacognosy.

The E. R. Squibb prize consists of one hundred dollars for special proficiency in analytical chemistry.

The Pace Prize consists of fifty dollars for highest proficiency in pharmaceutical accounting.

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H. R. 5531

"To the Congress of the United States:

"One of the most important duties of the Government is to provide to the utmost for the conservation of the health and lives of our gallant boys who are sacrificing comforts and jeopardizing their all in the cause of human liberty. They are certainly entitled to the very best medical and surgical skill and the most expert pharmaceutical service for the preparation of such medicines as may be needed by the sick or wounded.

"The various States have protected their citizens from incompetence in the compounding of medicines by licensing only qualified, trained pharmacists as dispensers of medicine. In our Army service no such provision for pharmaceutical supervision over the quality of drugs and the dispensing of medicines has yet been established. The dispensing of even the most poisonous drugs, is frequently entrusted to men who have had no education in pharmacy. Surely our soldiers are entitled to the same protection that in civil life was assured by their respective States.

"While in the armies of France, Germany, Austria, Italy, Spain, Belgium, Holland, Switzerland, Norway, Sweden and in the Colonial Armies of Australia and Canada there are organized pharmaceutical corps, with recognized commissions and responsibilities, ably aiding the other medical officers in safeguarding the troops in these armies, the United States has not yet established a Pharmaceutical Corps in the Army.

"Therefore, the undersigned citizens and relatives of the men in the military service of the Nation, urge upon Congress the necessity for this additional safeguard to our soldiers and petition that the Edmonds' Bill (H. R. 5531) 'To increase the efficiency of the Medical Department of the United States Army, to provide a Pharmaceutical Corps in that department and to improve the status and efficiency of the pharmacists in the Army,' be speedily enacted."

The above petition is being sent out by the N. P. S. A. with the request that every pharmacist obtain as many signatures thereto as possible before mailing the former to Chairman Dent of the House Committee on Military Affairs. At the same time each and every pharmacist is urged to write to his Congressman requesting him to support the Edmonds Bill. Have you written? If not, do so at once, using some of the facts stated inthe petition in your letter.

THE REGULATION OF DIAGNOSTIC LABORATORIES*

By Frederic E. Niece

During the past year and the early part of the present one, the New York state legislature, in co-operation with both the state and New York City health departments, has been exceedingly prolific in a legal way. The Federal government has likewise been active, so that diagnostic and analytical laboratories are obliged to comply with certain provisions that appear foreign to their calling. In the latter case, certain specified ingredients, used in many analytical methods, which are classified as components of explosive compounds, require for their use what is termed an "analyst's license." Our state and city health boards have caused to be enacted into laws several important and timely bills. Some of especial interest to privately owned and publicly conducted laboratories devoted to examinations of specimens involving the diagnosis of communicable diseases.

These various laws, being in the form of statutory resolutions and regulations, have primarily emanated from a desire on the part of health officials to curb or otherwise control the work done in laboratories of this calling, since it is a matter concerning the public health, which it is their duty to conserve.

Heretofore, the health departments have had no supervisory power over laboratories performing clinical examinations for diagnostic purposes. It is well known to the department, that this line of laboratory work has been running loose and careless, both with those connected with public clinics, and, as we have been advised, flagrantly so with a few private ones as well. So bold in some respects in the latter had the unscrupuluous become, that reports have been formulated so far in advance of the actual examination, by mutual consent, it has been said, that the examination *per se* was really *unnecessary*. It has become common talk amongst the help of a large concern in the city of New York, which maintains a laboratory in conjunction with its other business, that a printed form, embodying the results of an analysis, only requires the name of the patient and physician attached to the specimen to make the examination complete. How true this is can only be vouched for by those making the statements.

But in short, it is such things as these, be the facts true or false, that cast improper reflections upon legitimate laboratories, who endeavor to conduct an honorable and highly professional business. Thus it behooves honest laboratories to seek vindication; and such vindication may be theirs in the license granted by the health department, since it is next to impossible to get a permit to conduct a laboratory of this type in the city of New York, unless the standing of the laboratory, its equipment and staff, is above reproach, and fully capable of properly performing all the various tests incumbent upon such laboratory.

By virtue of the power now vested in the state and municipal health departments, an inspection of a laboratory can be made at any time. Its equipment, its facilities, the personnel of its staff and qualifications, as well as records pertaining to the examination of specimens from cases of communicable diseases; are all subject to health inspection on demand.

*Read at the Annual Meeting of the N. Y. S. P. A.

In all probability this is one of the best moves thus far made in this direction. Those familiar with work of this kind cannot but agree that it is good that some sort of power is granted a regularly constituted, legalized body, whereby differences, if any, may possibly be taken up and adjustment secured if need be. By reason of this, the manner in which some laboratories choose to work and expect a check analysis, which in many instances is next to impossible, will in time cause such work and workers to seek other pastures for operation. The health department will not allow a laboratory to continue very long after it has secured evidence sufficient to warrant a revocation of its permit. It must be known that any institution having for its object matters concerning the public health, to be of any value must seek to attain the most reliable technic extant and its proper execution and interpretation, so that the best interests of all concerned will be honestly and faithfully conserved. In no other line of work is this so essential as that relating to the public health, especially in cases of illness, for so much depends upon the actual truth of the findings. With the advent of the so-called "contract laboratory," and the crude methods pursued by them by reason of the unlimited number of examinations they were obliged to make under contract, a suspicion is created in the minds of the medical profession which has caused a cloud of distrust to be cast upon all privately owned laboratories performing diagnostic tests. This state of affairs impelled the writer to advocate, as a preliminary, the adoption of standards in laboratory methods, with the hope that some degree of uniformity in results would be obtained, and thereby give such laboratories the standing they deserved. This was in a paper printed in the *Jour. Amer. Pharm. Assn.*, issue of August, 1916, page 837, under title of "The Unification of Clinical Laboratory Methods," and abstracted in the 1916 *Yearbook* of the above, on page 407.

Realizing the situation too well, a foreword was sounded in the expression that, * * * "owing to the lack of desire to secure uniformity, it is for this reason that sooner or later the health department will see the need of controlling or regulating this line of work through legislation or by a set of recognized methods of analysis. This is a project that should be encouraged. * * * " My reason for using such terms was prompted solely by conditions as I knew them, and not by any other reason written or implied, other than the dictates of my own mind. Knowing nothing of any contemplated board regulations. Following this, on June 28th, 1917, ten months later, the New York city board of health passed the following resolution, known as Sec. 105 of the Revised Sanitary Code, which reads as follows:

> RESOLVED—that the following Regulations Governing the Conduct and Maintenance of Laboratories Offering Facilities for the Diagnosis of Communicable Disease be and the same are hereby adopted to read as follows:
>
> Regulation No. 1—APPLICATIONS. Applications for permits to conduct and maintain laboratories offering facilities for the diagnosis of communicable disease shall be made by the person in charge of the laboratory upon official application blanks furnished by the Department of Health.
>
> Regulation No. 2—A DULY QUALIFIED PERSON TO BE IN CHARGE. The person in charge of the laboratory shall be a duly licensed physician or a person whose qualifications are satisfactory to the Department of Health.

Regulation No. 3—SPECIMENS TO BE NUMBERED. Every specimen received at the laboratory for the purpose of determining the presence of communicable disease shall be numbered and so designated as to definitely establish the identity of each particular specimen.

Regulation No. 4—REGISTER TO BE KEPT. The person in charge shall cause a register to be kept wherein shall be entered the following information:

a—The laboratory number and date of the receipt of every specimen to be tested to determine the presence of a communicable disease.
b—The name of the physician submitting the specimen.
c—The result of the laboratory test.
d—The name of the person to whom the report of the result of the test was forwarded.

Regulation No. 5—EQUIPMENT. The laboratory shall be equipped with adequate facilities to properly perform such tests of specimens as the laboratory undertakes to make.

Regulation No. 6—METHODS. The methods employed shall be such as are generally recognized as effective.

Under regulations "5—Equipment" and "6—Methods," the following is given by the department in collaboration with Dr. Poor, as being the minimum required. While it must needs be far beyond the capabilities of the average type, it will demand however careful execution on the part of the more experienced. For the following I am indebted to Dr. H. G. MacAdam, Chief of Division of Institutional Inspection, Department of Health, City of New York:

APPARATUS FOR MAKING THE FOLLOWING DIAGNOSIS OF INFECTIOUS CONDITIONS

1st—*Examination of Sputum for Tubercle Bacilli.*

Platinum loop, glass slides, carbol fuchsin (decolorizer preferably 3% HCl in alcohol and counter stain with methylene blue) or Gabbets solution. Microscope, set of lenses including 1/12 oil immersion or more powerful lens.

2nd—*Diphtheria Cultures.*

Incubator maintained at approximately 37 degrees C., platinum loop, glass slides, Loeffler's methylene blue stain or equivalent, e.g., Neisser's stain, microscope.

3d—*Malaria.*

One of the blood stains, e.g., Jenner's, Wright's, Hasting's, Goldhorn's, Giemsa's and microscope.

4th—*Examination for Gonococcus.*

Gram's stain including aniline, or carbol gentian-violet. Gram's iodine solution, alcohol and a counter stain. Microscope.

5th—*Widal Test.*

For the microscope test, a live culture of typhoid bacilli in broth. Hollow ground slides with cover glasses. Microscope with high power dry lens No. 6 or No. 7 may be used. An oil immersion 1/12 may be used. For the *macroscopic test* a dead culture of typhoid bacilli. Test tubes.

6th—*Spirochaetae Pallida.*

Giemsa's stain or India Ink. Microscope or microscope with dark field illumination attachment.

7th—*Complement Fixation Wassermann Tests.*

Amboceptor, Antigen, Complement from guinea pigs. Sheep cells 5% suspension. Graduated pipettes. Water bath. Test tubes. Complement Fixation for Gonorrhoea—as above, plus gonococcus antigen. Complement Fixation for Glanders—as above, plus glanders antigen.

8th—*Differentiation Types of Pneumococcus.*

Mice, centrifuge, pipettes, antisera, test tubes, small syringe.

9th—*Examination of Feces for Typhoid.*

Petri dishes, slides, etc. Antisera. Endo-Conradi or Teague media.

10th—*Examination of Blood for Typhoid.*

Broth or bile flasks.

Just what attitude the department will take in passing upon a permit involving a drug-store laboratory, where dispensing of medicaments for the sick will go on in company with diagnoses of communicable diseases, can best be imagined from the terms of the regulation. In a great many cases it is likely that the average drug-store laboratory will come short of the requirements. But this will not deter drug-stores from receiving specimens and transporting them in sealed vessels to a centralized laboratory permitted to conduct such examinations.

Apropos of the above resolution, some time later the following appeared in the August, 1917, number, page 207, of the *Weekly Bulletin* of the Department of Health of the City of New York, entitled—

REGULATING PRIVATE LABORATORIES.

> "For some time the need has been apparent of exercising some control of private laboratories offering facilities for the diagnosis of communicable diseases. In a number of instances physicians have presented to the Department of Health evidence of incompetent or careless work on the part of some of these laboratories. This, of course, constitutes a distinct menace to health, especially when the specimen examined relates to a communicable disease.
>
> "By the addition of a new section to the Sanitary Code the Department of Health hopes to put an end to this evil. Hereafter, in accordance with Section 105, 'no laboratory offering facilities for the diagnosis of communicable diseases shall be conducted or maintained in the City of New York without a permit therefor issued by the Board of Health or otherwise than in accordance with the regulations of said Board.'"

Just what constitutes a communicable disease within the meaning of the regulation may be best gleaned from the department's requirement for those infectious diseases which are reportable. There are thirteen in number as follows: Tuberculosis, Diphtheria and croup, Measles, Scarlet Fever, Chicken-pox, Typhus Fever, Smallpox, Typhoid Fever, Whooping-cough, Syphilis, Gonorrhoea, Poliomyelitis (infantile paralysis), Cerebro-spinal Meningitis.

Following in connection with the above resolution, an amendment to Regulation 4, Sec. 105, was adopted by the Board of Health on Dec. 11/1917, which is as follows and went into effect at once:

AMENDMENT.

> Regulation 4—Records to be Kept. The person in charge of the laboratory shall cause a record to be kept wherein shall be entered the following information:
>
> a—The laboratory number and date of the receipt of every specimen to be tested to determine the presence of a communicable disease.
>
> b—The result of the laboratory test.
>
> The Department of Health may, in its discretion, require every such laboratory to furnish a statistical report covering a stated period and embodying the above specified information.

The form to follow in making records would be something in this order:

Lab. No. Date. Spec. Examined for. Results. Dr. Address. Patient. Address.

After passing favorably upon an application properly filled out, the following form of permit is issued to the applicant, as was done in the writer's case:

DEPARTMENT OF HEALTH, CITY OF NEW YORK.

No. 153627. When issued—Oct. 30-1917. Permission is granted to Frederic E. Niece, to conduct and maintain a Diagnostic Laboratory at 101 West 66th St., Boro of Manhattan. Signed by the Secretary. The permit is to be in force until revoked by the Board of Health. It is not transferable. And must be displayed in the place of business.

I would like to take up this resolution seriatum, and analyze its many virtues, but the time and space consumed in its reading alone will not permit the addition of comments at this time. It is anticipated on the part of the writer, however, that the future will see this phase of the resolution discussed at some length, at least after it has been in operation for a while, when it will have begun to make history. It will then be more interesting from all view-points, with the bare facts before us, than the mere assumption, on the part of the writer, at this early stage of its existence.

In the following we have a little different legal phase for diagnostic laboratories to comply with, and it also may be regarded as a commendable action. It applies to the handling, use, and transportation of live pathogenic germs. It is undoubtedly the outcome of the alleged use of disease germs for criminal purposes, by an arch criminal in his diabolical scheme to dispose of his many victims possessed of much money. It became a state law under Chapter 411, Laws of 1917, on May 8/1917, with the approval of the Governor:

> BEING AN ACT—as follows—to provide for the registration and supervision of laboratories where live pathogenic germs are handled, and to prevent the use of bacteria for criminal purposes, and to eliminate careless methods of transporting live germs.
>
> Sec. 1—All laboratories and other places where live pathogenic germs are handled or cultivated, shall be registered with the New York department of health, and a registration number shall be issued to each place so registered. Registration and application for this registration number shall be made by the person, firm or corporation in charge of the laboratory or other place where such germs are handled. The registration number shall be valid for one year, at the expiration of which time it may be renewed upon application.
>
> Sec. 2.—All live pathogenic germs, or cultures of such germs, when given away or sold by a laboratory or other persons shall bear a label on the container, showing the registration number of the laboratory, or other person, the name of the person or firm obtaining same, and the destination of the germs, and no person or laboratory shall sell or convey any live germs, or culture to any other person or laboratory without the permission of the State Commissioner of Health, providing, however, that nothing herein contained shall apply to places where live pathogenic germs or cultures of such germs are handled for duly organized public health boards or departments and for no other person or institution.
>
> Sec. 3—A registration fee of one dollar shall be charged to cover the cost of issuing the registration number.
>
> Sec. 4.—A violation of this act shall be deemed a misdemeanor punishable by a fine of two hundred dollars, six months imprisonment or both.
>
> Sec. 5.—This act shall take effect July first, nineteen hundred and seventeen.

SANITARY CODE, CHAPTER 11, REGULATION 43-a.

Distribution of Living Cultures of Disease-Inducing Bacteria.—No person having in his possession the cultures of pathogenic bacteria shall sell or convey such cultures to any person or laboratory unless first approved by the State Commissioner of Health. This enactment shall take effect May 1st, 1916, (Reg. added February 4, 1916).

The official application required to be filled out was in this case as follows:

> Date (Feb. 21/1918). (name of person making application) does hereby apply to the State Commissioner of Health for registration of the (state name of laboratory) under the provisions of chapter 411 of the laws of 1917 and do respectfully show as follows: 1—I am the (state name of official connection with laboratory) of the (state name of laboratory). 2—The said (name of laboratory) handles or cultures live pathogenic germs. The place where said laboratory is located is (state full address). (signature) (titles) (name of laboratory) (address of laboratory).

The form of permit granted on the above application was, in this case, as follows:

> New York State Department of Health, Albany.
>
> Frederic R. Niece, Director in charge of the CLAREMONT LABORATORY, 144 Columbus Ave., New York City, having applied for registration and paid the registration fee, in fulfillment of the provisions of chapter 411 of the Laws of 1917, is hereby registered as number one hundred and thirty-four 134. Date—March 17/1918. (Signed), Herman M. Biggs, Commissioner of Health.

The great harm brought into the lives of those addicted to the use of narcotic drugs and the part played by hypodermic needles and syringes therein, has caused exact legislation on the possession of the above instruments.

Aside from the New York City Health Department's regulation on the sale and possession of hypodermic needles and syringes, the State Health Board has also aided in passing a law known as Chapter 431, of the Laws of 1917, Sec. 249, which reads as follows:

> HYPODERMIC SYRINGES, SALE OF, RECORD, PENALTY.—It is unlawful for any person to sell or retail or to furnish to any person other than a duly licensed physician, dentist, or veterinarian, an instrument commonly known as a hypodermic syringe or an instrument commonly known as a hypodermic needle, without the written order of a duly licensed physician, dentist, or veterinarian. Every person who disposes of or sells at retail, or furnishes or gives away to any person, either of the above instruments, upon the written order of a duly licensed physician, dentist, or veterinarian, shall, before delivering the same, enter in the book kept for that purpose the date of the sale, the name and address of the purchaser, and a description of the instrument sold, disposed of, furnished or given away. It shall be unlawful for any person or persons, except a licensed pharmacist, licensed druggist, licensed physician, licensed dentist, licensed veterinarian, hospital or regular dealer in medical or surgical supplies, to possess such instrument, *without having in their possession a certificate from a physician certifying that the possession of such instrument is necessary for the treatment of injury, deformity, or disease then suffered by person possessing the same, or if possessed by a nurse, a certificate from a duly licensed physician that such possession is for professional purposes.* Any person or persons who sell, dispose of or give away an instrument commonly known as a hypodermic syringe, or an instruument commonly known as a hypodermic needle, excepting the manner prescribed in this section, shall be guilty of misdemeanor, provided however, that any person owning or having in his possession any such hypodermic syringe or hypodermic needle at the time this section, as amended, takes effect, may lawfully keep or retain the same upon obtaining from a duly licensed and registered physician, dentist or veterinarian within ten days after this section as hereby amended shall take effect, a certificate to the effect that such syringe and needle was purchased before this section, as amended, took effect and that such syringe or needle may be required for future use for treatment of an injury, deformity, or disease which person possessing the instrument is then suffering from.

While this may be considered a law not directly affecting clinical and diagnostic laboratories, it does cover, however, the use and possession of hypodermic syringes and needles which are so often necessary in obtaining various body fluids for examination, and in the procuring of blood for various biological, chemical and serological tests. They are both indispensable for the injection of animals with various pathological elements, for the purpose of determining their biological and bacteriological aspects. In conclusion, as a finale to date, we have one more law that diagnostic and analytic laboratories will be obliged to comply with. This law is known as the Federal Explosives License. It requires that a license be taken out by every person using ingredients that enter into the making of various explosives and detonators during a time when the United States is at war. In fact, I have recently been advised that ether and chloroform are now refused to purchasers by dealers and manufacturers, unless they produce their explosive license. We are all aware to what extent alcohol has been restricted for munition purposes, and it is no wonder that the above have come under the ban. What now follows in the above law is the so-called "Analyst's Explosive License," which reads under act of Congress, H. R. 3932, Sec. 10—part (g)—"Analysts, educators, inventors and investigators licenses authorizing the purchase, manufacture, possession, testing and disposal of explosives and ingredients."

These licenses are issued by the Director of the Bureau of Mines under authority of the Department of the Interior, through the various county clerks. In applying for the above license, an exception is made in this particular case, which does not apply to the other six licenses and is, as we should know, made for obvious reasons, which is: "an application for an analyst's license must be indorsed under oath by two responsible citizens, acquainted with applicant and known to the licensing officer." This act was approved on October 6/1917, and covers a certain number of chemicals largely used for special purposes in clinical and analytical laboratory methods, which also enter into and come under the general heading of explosive ingredients. In order to purchase, possess, use or offer for sale any of the ingredients listed below in amounts of one ounce and over, a Federal Explosives License will be required. The approved list of ingredients which are used in laboratory methods as above intimated, is as follows:

Bichromates—ammonium, potassium, sodium. *Chlorates*—barium, potassium, sodium, strontium. *Chromates*—ammonium, barium, calcium, chrome green, chrome yellow, potassium, sodium. *Nitrates*—ammonium, barium, copper, ferric, lead, magnesium, nickel, potassium, silver, and strontium. *Nitric Acid*—aqua fortis, fuming nitric, acids, of all grades and strengths, mixed acids. *Perchlorates*—perchloric acid, potassium. *Perborates*—magnesium, sodium, zinc. *Permanganates*—calcium, potassium, sodium. *Peroxides*—barium, calcium, magnesium, oxon (cubes and cartridges), sodium, strontium, zinc. *Phosphorus*—This would also include flashlight powders and fireworks.

A purchaser of the above ingredients must file with his dealer, jobber or manufacturer, a certified copy of his license before deliveries can be made. The mere information of a customer's license number is held not to be sufficient evidence to justify shipments or deliveries, within the meaning of the act.

An applicant for a license must appear in person and fill out an official printed form provided for the purpose, and under oath state the kind of ingredients of explosives purchased, disposed of or used by said applicant during the six months preceding the date of the application, and also the quantity of each remaining on hand.

A license fee of 25 cents is charged and payable to the licensing official, and 25 cents for each certified copy of the license issued. Copies must be issued by the licensing official only.

Another feature of the act is the question of records to be kept of sales and uses. If a sale is made, it must be recorded, and the sale made only to one possessing a purchaser's license if in amount more than one ounce. The person buying the same must be known to the vendor as a responsible party to possess the same.

The prime objects sought by the enactment is the conservation of the supply of crudes that enter into the production of munitions. Also to thwart, if possible, any attempt at unlawful acts by enemy aliens or sympathetic partisans, and thereby protect life, limb and property, by avoiding indiscriminate use and storing, and careless handling. In short, to control explosives and explosive ingredients from start to finish.

ASSAY OF GLYCERIN IN MIXTURE OF RHUBARB AND SODA*

By H. V. Arny and Philip Breivogel

Those analysts who have been called upon to conduct glycerin assays are well aware of the unsatisfactory character of the several published methods of assay. The method suggested by Leech in his classic book, Food Inspection and Analysis, is known to possess the fatal error of directing at some stage of the process the use of heat, although it is known by those who have studied the problem systematically that glycerin evaporates in water vapor even at water bath heat. The Briggs process, *Jour. A. Ph. A.*, January, 1915, 75, aside from the high cost of the sandalwood oil needed in the operation, gave us results that were far from satisfactory.

Our fellow member, Dr. J. L. Mayer, gave us the lead to a successful assay of glycerin in mixture of rhubarb and soda by suggesting the evaporation of the sample at a heat not greater than 50 degrees C., and finally subtracting from the weight of the evaporated residue thus obtained, the weight of sodium bicarbonate in the sample as ascertained by the ash determination.

This led us to a study of the influence of a temperature of fifty degrees on aqueous solutions, and we found that with samples of known strength the loss of glycerin was appreciable. Thus 3 mils of such a solution containing 1.57 Gm. glycerin 100 percent. on heating to 50 degrees for 2 hours left 1.54 Gm. of residue, a loss of 2 percent.; and in another case 4 mils of the solution containing 2.094 Gm. glycerin left 2.027 Gm. of residue, a loss of about 3.5 percent.

*Read at the Annual Meeting of the N. Y. S. P. A.

We therefore turned to the idea of vacuum evaporation at ordinary temperature and obtained satisfactory results by this method. We placed a small, weighed sample in a flat container (Petrie dish) with a suction desiccator containing concentrated sulphuric acid as a dehydrator. We pumped out the air by use of a water suction pump, and allowed the desiccator to remain in exhausted condition for 24 hours, after which we removed the Petrie dish and weighed it. This was repeated each day until the dish no longer lost weight, after which the residue was calculated as glycerin. On samples of aqueous solutions of glycerin, we obtained the following figures:

Amount sample.	Glycerin present.	Residue.
5 mils	2.095 gm.	2.090 gm.
5 mils	1.572 gm.	1.575 gm.
5 mils	1.048 gm.	1.050 gm.
5 mils	0.524 gm.	0.525 gm.

In the case of mixture of rhubarb and soda, we evaporated in vacuo a measured quantity and thus obtained a residue consisting of glycerin, rhubarb extractive and sodium bicarbonate. The ash obtained from this residue calculated as bicarbonate, was subtracted from the residue, the difference being glycerin and the scarcely appreciable amount of rhubarb extractive.

Our figures thus obtained are given below:

Sample of mixture of rhubarb and soda contained 41.912 Gm. of glycerin, dehydrated by standing in vacuo and 3.5 Gm. of sodium bicarbonate in 100 mils.

	Amount sample.	Wt. glycerin bicarbonate and extractive.	Calculated wt. of bicarbonate.	Weight glycerin found.	Theoretical weight glycerin present.
1.	5 mils	2.285 gm.	.142 gm.	2.143 gm.	2.0956 gm.
2.	5 mils	2.280 gm.	.125 gm.	2.155 gm.	2.0956 gm.
3.	5 mils	2.275 gm.	.116 gm.	2.159 gm.	2.0956 gm.

Sample of mixture of rhubarb and soda contained 20.956 Gm. of glycerin dehydrated by standing in vacuo and 3.5 Gm. of sodium bicarbonate in 100 mils.

	Amount sample.	Wt. glycerin bicarbonate and extractive.	Calculated wt. of bicarbonate.	Weight glycerin found.	Theoretical weight glycerin present.
1.	5 mils	1.215 gm.	.134 gm.	1.081 gm.	1.0478 gm.
2.	5 mils	1.223 gm.	.115 gm.	1.108 gm.	1.0478 gm.
3.	5 mils	1.220 gm.	.115 gm.	1.115 gm.	1.0478 gm.

It will be seen that the figures thus obtained for glycerin were not uniform, due undoubtedly to the fact that the ash did not consist wholly of sodium carbonate. We therefore tried the expedient of converting the bicarbonate in the mixture of rhubarb and soda into chloride by addition of the proper amount of concentrated hydrochloric acid and obtained the satisfactory results given below:

Sample of mixture of rhubarb and soda contained 41.912 Gm. of glycerin dehydrated by standing in vacuo and 3.5 Gm. of sodium bicarbonate in 100 mils.

	Amount sample.	Wt. glycerin bicarbonate and extractive.	Wt. sodium chloride.	Weight glycerin found.	Theoretical weight glycerin present.
1.	5 mils	2.238 gm.	.120 gm.	2.118 gm.	2.0956 gm.
2.	5 mils	2.235 gm.	.121 gm.	2.114 gm.	2.0956 gm.
3.	5 mils	2.237 gm.	.117 gm.	2.120 gm.	2.0956 gm.
4.	5 mils	2.230 gm.	.119 gm.	2.111 gm.	2.0956 gm.

Sample of mixture of rhubarb and soda contained 20.956 Gm. of glycerin dehydrated by standing in vacuo and 3.5 Gm. of sodium bicarbonate in 100 mils.

	Amount sample	Wt. glycerin bicarbonate and extractive.	Wt. sodium chloride.	Weight glycerin found.	Theoretical weight glycerin present.
1.	5 mils	1.190 gm.	.121 gm.	1.069 gm.	1.0478 gm.
2.	5 mils	1.183 gm.	.120 gm.	1.063 gm.	1.0478 gm.
3.	5 mils	1.178 gm.	.119 gm.	1.059 gm.	1.0478 gm.

Studying the foregoing tables, it will be seen that the glycerin figures obtained by the assay are satisfactorily uniform, the variation between the highest and lowest result when preparation of full glycerin content was used, being only 0.35 percent. On the other hand the figures obtained are about one percent higher than the amount of glycerin actually present in the sample, a figure higher than that represented by the extractive of the rhubarb. This variation, however, is less than that obtained by us from other assay methods and is in favor of the seller of the sample.

Our present method of assay is as follows:

Five mils of the mixture of rhubarb and soda are accurately weighed in a Petrie dish and after the addition of enough concentrated hydrochloric acid to convert the bicarbonate into chloride, it is then evaporated in a vacuum desiccator containing sulphuric acid as dehydrating agent and a small dish containing soda lime to absorb any excess of hydrochloric acid. After exhaustion of the container, the mixture is allowed to stand twenty-four hours before weighing. It is similarly treated each day until it ceases to lose weight. After thus obtaining the weight of glycerin, sodium chloride and extractive contained in the sample, the residue is ashed and the weight of the ash, sodium chloride, subtracted from the residue obtained by evaporation gives the amount of glycerin and extractive present in the sample. Of course, from the weight of sodium chloride, the amount of sodium bicarbonate present in the original mixture can be obtained by molecular weight calculations.

It is obvious, if the glycerin in the mixture of rhubarb and soda is replaced by some of the cheaper glycerin substitutes now on the market, the residue obtained by evaporation would be something other than glycerin. As most glycerin substitutes contain glucose or similar reducing carbohydrates, all samples of the mixture of rhubarb and soda should be tested, prior to the glycerin assay, for reducing sugars. This procedure is, however, subject to several difficulties. In the first place, the extractive in mixture of rhubarb and soda contains substances of reducing character. Our tests in this direction, however, show that the amount is small, two mils of Fehling's solution (representing 0.01 gm. glucose) requiring from twenty-one to 21.7 mils of the official mixture for complete reduction.

On the other hand, a more serious difficulty comes from the fact that the various suggested glycerin substitutes contain different forms of carbohydrates, such as commercial glucose, straight or invert sugar. As these substances possess different Fehling factors, and as different samples of commercial glucose give different reduction figures with Fehling's solution, this part of the problem is by no means solved and we hope to do further work in this direction. In passing, however, it might be stated that a sample of mixture of rhubarb and soda which completely reduces more than one-tenth its volume of Fehling's solution is to be considered suspicious.

The amount of time actually expended in carrying out the assay is slight, being limited to the several weighings and the determination of reducing sugars. The operation, however, covers several days of time, but we find with a good vacuum the sample ceases to lose weight within two or three days.

THE WAR AND PHARMACY*

By Curt P. Wimmer

On the occasion of last year's meeting of The New Jersey Pharmaceutical Association the author of this paper took the liberty of presenting a paper entitled "The War and Pharmacy." In that paper it was his aim to bring before you conditions as they existed then in the various belligerent countries and from them draw certain conclusions with an idea of applying them to our own country. The development of conditions in pharmacy during the past year has fully justified and confirmed what amounted, in a measure, to a prophecy last year. It is for this reason that I feel encouraged to come before you again with a paper of a similar nature. It is a matter of great interest to all of us to know what our colleagues on the other side of the ocean are doing, what they are sacrificing and how the war in its various stages affects them.

Without a doubt, the greatest difficulty which English pharmacists have to contend with is the crying need of qualified assistants. In that respect conditions are bad indeed. A number of drug-stores have been closed on account of lack of help, others are open only during certain hours of the day. The "man-power" bill recently enacted will call many individual pharmacists, who for industrial reasons hitherto have enjoyed exemption, into active service.

To a certain extent women are taking the places of men. Of one hundred students of the London Pharmaceutical College who passed the minor examination last month, forty-two were women.

The needs of the times have caused European pharmacists to get together as never before, to protect their interests. The London Society, for example, has set up a "Pharmaceutical Central Advisory Committee" which is to deal with the question of liability of individual pharmacists to military duty. The committee has been created with the consent of the Ministry of National Service and other government departments and will assist the local boards in deciding questions relative to the exemption from military service of individual pharmacists. It is, of course, not the intention of this committee to endeavor to secure exemption for each and every pharmacist, but only for those whose call to the colors would seriously interfere with the public welfare.

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*Read at the Annual Session of The N. J. P. A.

Other evidence of harmonious action may be found in the consideration of "collective advertising" by the pharmacists of the city of Liverpool. By common agreement of the pharmacists in Dover all drug stores are closed between 1:15 and 2:15 p.m. daily. Furthermore there has been no relaxation in the efforts of the English pharmacists to have a pharmaceutical corps established in the army, which fact should be an incentive to us to keep on trying in spite of opposition and discouragement to get the Edmonds Bill enacted into a law. United and continued efforts will and must win in the end.

The question of supplies, especially of such substances as may be used as foodstuffs, for medicinal uses is a trying one. The sugar ration of the English pharmacist has now been cut to 25% of the amount used in 1915 and every pound used must be accounted for. To save sugar and glycerin a great number of preparations of the British Pharmacopoeia have been made unofficial and substitute formulas have been sanctioned. After some hesitation the British Government has recently permitted the use of saccharine as a sweetening agent in foods and, wisely, has fixed the price of saccharine. This has resulted in a tremendous increase in the use of saccharine. One manufacturer advertises that he could dispose of six million tablets per hour if he had the machinery to manufacture this number and regrets that he cannot fill all his orders as he can manufacture only six million tablets per week.

Glycerin is no longer available for medicinal uses as the government has need of every ounce it can get.

A serious development of the last year is the increasing scarcity of oils and fats. In times of war, the first consideration of a nation is food, and ammunition is the second one. All other commercial interests must suffer from any lack of raw materials. It is absolutely essential, therefore, that the use of edible substances as components of medicines be either prohibited, restricted or controlled as the case may be and so we find that the use of edible oils and fats for medicinal purposes is no longer permitted; some small amounts may be obtained upon application. There have been withdrawn from the British Pharmacopoeia a number of preparations, notably camphor liniment, chloroform liniment and others and permission has been given to modify all such preparations. Lard, olive oil, castor oil may no longer be dispensed, even in prescriptions. Whenever benzoated lard is prescribed, an official substitute, which must contain 3% of benzoin must be dispensed.

In consequence of this scarcity of oils, soap is becoming more and more expensive, indeed some retailers complain that they cannot get it at all. Small wonder that the hydrogenation of fixed oils to render them suitable for the manufacture of oleomargarine is becoming a process of the utmost importance. Germany and Norway have attained high perfection in making edible fats out of fish oils, such as cod liver oil, whale oil and also out of linseed oil and cottonseed oil, the origin of which cannot be detected in the finished product by smell and taste. The manufacture of such fats is receiving a great deal of attention in England and the total output in that country will be trebled during the coming year. It may be of interest to you to know what the English pharmacists use in place of lard in their ointments. Since glycerin is also excluded from use in medicinals, agar-agar, tragacanth, etc., cannot be used as ointment bases since they require glycerin to keep them moist. There are a great many lard and glycerin free ointment bases and I give you the formulas of a few, which I find published in the *Chemist and Druggist*:

(a)	Paraffin, white, hard	1½ ounces
	Paraffin, white, soft	14½ ounces

This is claimed to be entirely satisfactory for use in making ointment of ammoniated mercury, sulphur ointment, etc. Other formulas are:

(b)	White petrolatum oil	14 ounces
	White wax	4 ounces
	Hard paraffin	4 ounces
	Powdered borax	½ ounce
	Hot water	12 ounces

The following four formulae are claimed to answer for most ointments:

(a)	Lanolin	30.00
	Soft paraffin	10.00
(b)	Soft paraffin	70.00
	Spermaceti	5.00
	Distilled water	q.s. to make 100.00
(c)	Anhydrous lanolin	65.00
	Liquid paraffin	30.00
	Ceresin	5.00
	Water	30.00
(d)	Beeswax	
	Lanolin aa partes eq.	

Such are the difficulties under which our European colleagues labor. I have outlined only a very few of the more important ones; to even mention all of them would require considerable time. The reply "sorry, we are all out of it" is now heard many times a day in the chemist's shop and the customer no longer evinces any surprise.

Before passing on I beg to mention that in a governmental report on post-bellum problems it is recommended that the metric system be officiallly adopted and that a decimal coinage system be introduced. In a bill now pending in the House of Lords it is proposed to coin 1, 2, 3 and 4 mil pieces of bronze, 5 and 10 mil pieces of nickel, quarter florin, half florin and florin of silver. One florin will be equivalent to 100 mils. If this bill passes the time honored shilling and pound will disappear. There is also a movement to revolutionize pharmaceutical education, the details of which are very interesting to the teacher in pharmacy but go beyond the limits of this paper's subject matter.

And now let us devote a few minutes to some conclusions which we are justified to draw from the consideration of conditions as they now exist in European countries and as they are beginning to shape themselves slowly but unavoidably here as well. First of all it seems to me that these conditions demonstrate in the strongest possible measure the absolute and urgent necessity of a get-together movement among the pharmacists of the entire country. If ever there was a need for harmonious action it is *now*, if ever there was a chance to succeed in such efforts it is *now*. Picture to yourself what a power you could be if ten or fifteen thousand pharmacists were united in one strong organization; think what influence in matters concerning the entire nation an organization comprising all of the branches of pharmaceutical endeavor could exert. Forget your petty jealousies, dismiss from your mind the thought that John Johns is your competitor, think of him as a friend, an associate whose interests are the same as yours. We are beginning to become engaged in a game of tug-o-war. At the end of the rope there is a steady pull, becoming stronger and stronger as each day passes, due to conditions provoked by troublous times, high prices, scarcity of supplies, shortage of labour. Let us unitedly take hold of the other end of the rope and pull together in the right direction and we will not be swept off our feet.

On each letter and each post-card the government sends out this warning: "Food will win the war, don't waste it!" Those who follow up conditions abroad more closely than those who only read newspaper reports realize that this exhortation is not an unnecessary one. Have you ever stopped to think to what extent food-stuffs are used in medicines? It is true that in many instances such food-stuff can not be replaced by something else and still the same medicinal effect produced, but it is equally true that a considerable amount of food can be saved by a judicious effort on part of the pharmacist. We use eggs, lard, flour, olive oil, sugar and many other important foods in medicines. Let us heed the warning and restrict their use wherever and whenever possible! If we do not do this, we merely hasten the time for the institution of a radical system of rationing. There is not the slightest doubt in my mind that this will come. Great and glorious as our country is, its resources are not unlimited.

There is not the slightest prospect that labor conditions will get better in the near future. They will readily get worse.

Women may in time relieve the situation to a certain extent, but too much should not be expected from this source. The owner of several large stores told me a few days ago that he had tried employing girls at the soda fountain, but found that in many instances they were physically unfit for the work. In another instance the male force employed threatened to quit work when the possibility of female employees was mentioned. These are, no doubt, isolated instances, nevertheless they show that female labor will not be a cure for all of our ills.

Comparing our situation with that of our colleagues in Europe, we can only say that we are very fortunate indeed. Whatever sacrifices we are now making and will make in the future will not have been made in vain. A greater, freer world lies beyond the valley of shadows and sacrifices into which we are now passing. The one great lesson which we need to learn from conditions here and there is:—Get together, pharmacists, and let your voice be heard!

THE ALUMNI ASSOCIATION OF THE COLLEGE OF PHARMACY OF THE CITY OF NEW YORK

Officers, 1918-1919

President
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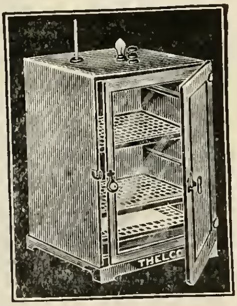

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